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ELIMINATING THE CONFUSION: A RESTATEMENT OF THE TEST FOR COPYRIGHT INFRINGEMENT

Aaron M. Broaddus*

I. INTRODUCTION

The current approaches used by the courts in analyzing and deciding claims of copyright infringement vary among the different circuits and within each circuit based on the type of work at issue. Despite the myriad of approaches adopted by the various courts and those advocated by numerous commentators, no clear, workable set of rules has emerged to deal with this issue.

Additional complications arise from the use of confusing and inconsistent terminology in the courts' opinions. But despite the problems that pervade this area of the law, the Supreme Court has yet to address this issue in a way that provides meaningful guidance to the lower courts.¹

This paper aims to provide a framework that can be applied to resolve copyright infringement issues regardless of the type of work in question.² The proposed methodology is based on the "filtration" approach that is emerging as the preferred method for analyzing infringement cases involving computer programs.³ The basic principle underlying this methodology is the "filtering" out of

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1. The Court's decision in *Feist Publications, Inc. v. Rural Tel. Serv. Co., Inc.*, 499 U.S. 340 (1991), while dealing with a claim of copyright infringement, disposed of the issue upon finding that the material copied by the defendant was not protected expression. The Court found that the material copied by the defendant lacked the necessary level of creativity to warrant copyright protection. Thus, despite the defendant's having copied substantial portions of plaintiff's copyrighted telephone directory, there was no copyright infringement as the copied material was not protected material. For this reason the Court in *Feist* found it unnecessary to undertake an extended analysis of the infringement issue.

2. Of course, there will be some variation in the actual analysis of different types of works. For example, an analysis of the specific elements of a literary work is not likely to be much help in relation to musical works. The purpose of the proposed test is to provide a clear methodology that allows for application to various types of works in such a manner as to provide for ease in application, clarity in approach, and predictability in outcome.

3. For a detailed explanation of this methodology as applied to computer programs See David Nimmer, et al., *A Structured Approach to Analyzing the Substantial Similarity of Computer Software in Copyright Infringement Cases*, 20 ARIZ. ST. L.J. 625 (1988). See also 3 MELVILLE B. NIMMER & DAVID NIMMER, *NIMMER ON COPYRIGHT*, § 13.03[F] (1992) (hereinafter "NIMMER ON COPYRIGHT"). Nimmer has also suggested in his treatise that the Supreme Court's decision in *Feist* supports the

any unprotected elements of the plaintiff's work before comparing that work with the defendant's allegedly infringing work. The proposed analysis starts with an inquiry as to the validity of the plaintiff's copyright ownership and a consideration of the defendant's access to the plaintiff's work. After ownership and access are established, the inquiry turns to a separation of unprotectible ideas from the protectible expression contained in the plaintiff's work. Once the protectible expression is separated, any additional unprotected elements are "filtered" out, leaving a core of protectible expression. Finally, after the filtration step, the question to be addressed is whether the defendant appropriated plaintiff's protected expression, and whether such appropriation is sufficient to warrant a finding of copyright infringement.

On the issue of improper appropriation, the proposed methodology breaks with the traditional approach by comparing only the plaintiff's protected expression, not the plaintiff's work as a whole, to that of the defendant's. It is also argued that analytic dissection and expert testimony, both of which are almost exclusively precluded in the determination of whether there has been improper appropriation, are permissible, and should be viewed as necessary where the works at issue involve matters beyond the fact finder's scope of knowledge.⁴

Part Two of this paper provides a critical overview of the current copyright infringement approaches of the various circuits, including a discussion of the shortcomings and contradictions that exist in applying these approaches. Part Three restates the filtration approach and applies the new formulation to various copyright infringement cases involving different types of works.

II. AN OVERVIEW OF THE CURRENT APPROACHES TO COPYRIGHT INFRINGEMENT ANALYSIS

As stated by the *Supreme Court in Feist Publications, Inc. v. Rural Tel. Serv. Co., Inc.*,⁵ "[t]o establish [copyright] infringement, two elements must be proven: (1) ownership of a valid copyright, and (2) copying of constituent elements

application of this methodology to works other than computer programs. Nimmer correctly notes the Court's analysis in *Feist* as having taken "a copyrighted work and eliminated from the substantial similarity calculus all material therein not subject to copyright" prior to comparing the work to the defendant's on the question of improper appropriation. *Id.* at § 13.03[E][1][b]. This methodology mirrors the filtration approach. Thus, as *Feist* was not limited to cases involving directories or compilations, it would seem to be consistent with *Feist* to undertake a similar analysis regardless of the type of work being considered.

A thorough analysis of the filtration approach, as interpreted by the Second Circuit, is set forth in *Computer Assocs. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693 (2d Cir. 1992). This case is discussed in detail *infra*, sections II(B)(3)(a) and III(B)(4).

4. The rare instances where analytic dissection and expert testimony have been permitted on the question of improper appropriation have been limited primarily to cases dealing with computer programs. But even in those cases, the decisions allowing analytic dissection and expert testimony on this question are relatively few in number. But the trend does seem to be moving in that direction. See, e.g., *Altai*, 982 F.2d 693.

5. 499 U.S. 340 (1991).

of the work that are original.”⁶ Thus, in the broadest of terms, infringement analysis may be construed as consisting of two elements, ownership and copying. Although the following discussion is organized accordingly, the primary focus is on the second part of the copyright infringement analysis which is by far the most problematic.

A. OWNERSHIP

Copyright ownership⁷ is a prerequisite to a finding of copyright infringement. Under the 1976 Copyright Act,⁸ a copyright registration certificate constitutes prima facie evidence of ownership.⁹ Once the plaintiff makes such a prima facie showing of ownership, the burden shifts to the defendant to prove a lack of ownership.¹⁰ Because of the ease in establishing ownership as an initial matter, and the difficulty in rebutting the presumption of ownership, the vast majority of plaintiffs in infringement cases have little trouble on this issue. Once ownership is established, the court must then turn to the more difficult issue of copying.

B. COPYING

Actual proof, as substantiated by direct evidence such as admission or eyewitness testimony, is the most desirable means of establishing copying of a plaintiff's work. If copying can be shown by direct proof, then the court need only consider whether such copying amounts to improper appropriation.¹¹ Because such proof is often lacking, the courts allow plaintiffs an alternative means to prove copying, by use of circumstantial evidence. Proving copying by circumstantial evidence is often stated as requiring the plaintiff to show “(1) that the defendant had access to the plaintiff's work, and (2) that the two works are

6. *Id.* at 361 (citing *Harper & Row, Publishers, Inc. v. Nation Enter.*, 471 U.S. 539, 548 (1985)).

7. It is important to note that the six rights listed in § 106 of the 1976 Copyright Act, 17 U.S.C. §§ 101-801 (1989), are separate, distinct and severable. For example, one may own the right to make reproductions of the original (§ 106(1)) while another individual may own the right to produce derivative works based on the original (§ 106(2)).

8. 17 U.S.C. §§ 101-801 (1989).

9. 17 U.S.C. § 410(c) (1989), provides that:

In any judicial proceedings the certificate of a registration made before or within five years after first publication of the work shall constitute prima facie evidence of the validity of the copyright and of the facts stated in the certificate. The evidentiary weight to be accorded the certificate of a registration made thereafter shall be within the discretion of the court.

10. *See Gund, Inc. v. Applause, Inc.*, 809 F. Supp. 304, 307 (S.D.N.Y. 1993) (stating that a copyright registration certificate is prima facie evidence of copyright ownership, “shifting to [the defendant] the burden of proving the contrary.”)

11. If direct proof of copying is shown, it is still necessary to entertain the question of improper appropriation. The mere existence of copied material does not render a defendant's work infringing. Such copying might be de minimis, that is, insignificant in quantity or quality, it might consist of material in the public domain, or it may be unprotected expression. Thus, even if copying is shown by direct proof, it must still be shown that the copying extends to the plaintiff's protected expression and that the copying is sufficient to warrant a finding of infringement. *See infra*, section II(B)(3).

substantially similar.”¹² On the question of substantial similarity it is recognized that “a plaintiff establishes substantial similarity by showing (1) that ‘the defendant copied from the plaintiff’s work and (2) [that] the copying, if proven, went so far as to constitute improper appropriation.”¹³

This widely accepted formulation of the copyright infringement test, requiring a showing of substantial similarity to prove copying, and requiring proof of copying to show substantial similarity, is but an introduction to the confusion which pervades this area of the law. As this formulation of the infringement test demonstrates, much of this confusion is due to the use of improper and inconsistent terminology.¹⁴ The modified infringement test set out in Part III of this paper is an attempt to eliminate this confusion.

As for the double use of “copying” in the above discussion, the fact is that “copying” is not being used in the same sense in both instances. Copying as used in the first instance, in referring to the elements of the copyright claim, “refers to the ultimate . . . issue of whether the defendant violated the copyright laws by reproducing protectible [sic] expression from the plaintiff’s work.”¹⁵ In the second instance, where “copying” is used as a part of the substantial similarity test, it refers to the “purely factual issue of whether the defendant used the plaintiff’s work as a starting point for his own.”¹⁶

In an effort to avoid such confusing formulations, the following discussion sets out the requirements for proving copying by circumstantial evidence as calling for a three part inquiry. This formulation follows the Second Circuit’s decision in *Arnstein v. Porter*,¹⁷ the leading case on copyright infringement. Our analysis begins with a discussion of access and the issues related to proof of access. Then we consider the question of copying, that is, copying as used in the “substantial similarity” context discussed above. And finally, we look to the issues related to improper appropriation.¹⁸

12. *Stillman v. Leo Burnett Co., Inc.*, 720 F. Supp. 1353, 1357 (N.D. Ill. 1989) (citing *Atari, Inc. v. North Am. Philips Consumer Electronic Corp.*, 672 F.2d 607, 614 (7th Cir. 1982)).

13. *Id.* (brackets in original).

14. Additional problems arise from the use of terms such as “substantial similarity” where the similarities being considered need not be substantial at all. These problems will be addressed as they arise in subsequent discussions.

15. *Stillman*, 720 F. Supp. at 1357.

16. *Id.*

17. 154 F.2d 464 (2d Cir. 1946).

18. It should be noted that some courts, particularly those within the Ninth Circuit, have adopted a different approach that does not treat the question of improper appropriation as a separate, distinct, element of the infringement test. According to this approach, the test for copyright infringement requires proof of copyright ownership and copying by the defendant. Copying is proven by access and substantial similarity. Substantial similarity is proven by showing substantial similarity of ideas and substantial similarity of expression. The question of whether the defendant’s copying amounts to improper appropriation of the plaintiff’s protected expression is not explicitly considered, but rather, is implicit in the courts’ consideration of the similarities in the works at issue.

In the courts that follow *Arnstein*, however, copying and improper appropriation are clearly treated as separate, distinct, issues. In these jurisdictions, proof of copyright infringement can be shown by proof of copyright ownership and copying by the defendant. Copying in turn is proven by

1. Access

Access in the context of copyright infringement means that the defendant had an opportunity to view or hear the plaintiff's work. It is important to note that the plaintiff need not show that the defendant actually viewed the work, she need only show that the defendant had an opportunity to do so.¹⁹ A showing of access thus establishes that the defendant had an opportunity to view, and more importantly, an opportunity to copy, the plaintiff's work.²⁰ This showing of access is necessary because, without access, it is impossible that the defendant copied the plaintiff's work.

Although the general rule is that there must be some showing of access to sustain an infringement action, it has been widely accepted that access may be inferred if the allegedly infringing work is "strikingly similar" to the copyrighted work.²¹ Striking similarity has often been defined as "similarities . . . that can only be explained by copying, rather than by coincidence, independent creation, or prior common source,"²² or alternatively, "similarity . . . of a type which will preclude any explanation other than that of copying."²³

It is important to note here that a finding that the defendant's work is strikingly similar to plaintiff's does not eliminate the requirement of access as a condition to proving infringement. Instead, striking similarity gives rise to an inference of access by negating the possibility that the work could have been derived from independent creation, common source or some other work besides the plaintiff's. This distinction is important to keep in mind because, although a showing of striking similarity allows the court to infer access,²⁴ most courts will still require that there be at least a bare possibility that defendant had access to plaintiff's work.²⁵

evidence of access, similarities sufficient to prove copying and proof that the copying amounts to unlawful appropriation of the plaintiff's protected expression.

We will see in later discussions that the rationale and the propriety of the Ninth Circuit's analysis is questionable and subject to much criticism. The organization of this paper is in accordance with *Arnstein* as it provides a sound foundation on which to build and makes for a more logical analysis of the issues to be addressed.

19. See NIMMER ON COPYRIGHT § 13.02[A].

20. *Id.*

21. See *Arnstein*, 154 F.2d at 469. See also NIMMER ON COPYRIGHT, § 13.02[B] ("If . . . the similarity between plaintiff's and defendant's works is sufficiently striking and substantial the trier of fact may be permitted to infer copying notwithstanding the plaintiff's failure to prove access.").

22. *Selle v. Gibb*, 741 F.2d 896, 904 (7th Cir. 1984) [(citing *Testa v. Janssen*, 492 F. Supp. 198, 203 (W.D. Pa. 1980) (quoting *Stretchborneo v. Arc Music Corp.*, 357 F. Supp. 1393, 1403 (S.D.N.Y. 1973))].

23. *Selle*, 741 F.2d at 905.

24. *Nash v. CBS, Inc.*, 704 F. Supp. 823, 826 (N.D. Ill. 1989), *aff'd*, 899 F.2d 1537 (7th Cir. 1990).

25. But see *Selle*, 741 F.2d at 902 (holding that, despite a showing of striking similarity, "a defendant's opportunity to view the copyrighted work must exist by a reasonable possibility - not a bare possibility") (quoting *Testa v. Janssen*, 492 F. Supp. 198, 202-03 (W.D. Pa. 1980). *Contra Gaste v. Kaiserman*, 863 F.2d 1061, 1068 (2d Cir. 1988) (explicitly rejecting *Selle* on this point and stating that, in the Second Circuit, striking similarity sufficient to preclude the possibility of independent

Under this exception to the rule, a greater showing of similarity (as in striking similarity) will allow for a lesser showing of access. It has been suggested that the converse - that, as the showing of access increases, the required degree of similarity that need be shown, will decrease - is a valid proposition. Indeed, courts and commentators alike have supported this "inverse-ratio" rule in principal.²⁶ But the underlying rationale is suspect and, in application, is unsound.²⁷

To illustrate, consider Nimmer's analysis on this issue. He begins his discussion of the "inverse-ratio" rule by recognizing that "clear and convincing evidence of access will not avoid the necessity of also proving substantial similarity, because access without similarity cannot create an inference of copying."²⁸ After recognizing that, in this most extreme application, the rule is unsound, Nimmer then re-asserts the validity of the "rule" in stating that, "given that a very high degree of similarity is required in order to dispense with proof of access, it must logically follow that where proof of access is offered, the required degree of similarity may be somewhat less than would be necessary in the absence of such proof."²⁹

But the problem here is that Nimmer merely restates the exception discussed above, that where striking similarity is shown, the showing of access may be lessened or dispensed with. It does not follow, however, that as the showing of access increases, the required showing of similarity decreases as on a sliding scale. As will be discussed momentarily, the degree of similarity necessary to prove copying need not be substantial in any event, the similarities need only be probative of copying.³⁰ Such similarities may or may not be substantial. Thus, regardless of the quantum of proof as to access, the requisite showing of similarities necessary to establish copying is a threshold matter and not one of degree.³¹ From this it logically flows that the similarities necessary to establish

creation is sufficient, absent any proof of access, to support a finding of infringement).

26. See *Sid & Marty Krofft Television Productions, Inc. v. McDonald's Corp.*, 562 F.2d 1157, 1172 (9th Cir. 1977) ("... where clear and convincing evidence of access is presented, the quantum of proof required to show substantial similarity may ... be lower than when access is shown merely by a preponderance of the evidence."); *Steinberg v. Columbia Pictures Indus., Inc.* 663 F. Supp. 706, 714 (S.D.N.Y. 1987) ("As defendants have conceded access to plaintiff's copyrighted illustration, a somewhat lesser degree of similarity suffices to establish a copyright infringement than might otherwise be required."); NIMMER ON COPYRIGHT, § 13.03[D] (suggesting that "[since] a very high degree of similarity is required in order to dispense with proof of access, it must logically follow that where proof of access is offered, the required degree of similarity may be somewhat less than would be necessary in the absence of such proof") (emphasis in original).

27. See Justice Clark's opinion in *Arc Music Corp. v. Lee*, 296 F.2d 186, 187 (2d Cir. 1961), rejecting the "inverse-ratio" rule and stating that:

We fear that counsel with that semantic proclivity natural to our profession have allowed themselves to be seduced by a superficially attractive apophthegm which upon examination confuses more than it clarifies. The logical outcome of the claimed principle is obviously that proof of actual access will render a showing of similarities entirely unnecessary.

28. NIMMER ON COPYRIGHT, § 13.03[D].

29. *Id.* (emphasis in original).

30. See *infra* section II(B)(2)(a).

31. Even if access is admitted, the presence of similarities probative of copying remains the same.

The required showing of similarities does not change as the quantum of proof concerning access

copying do not decrease in any event, and any “inverse-ratio” rule suggesting such is unsound.

Returning to our initial discussion of striking similarity, it should be noted that even in cases where there is a finding of striking similarity, a defendant may rebut the presumption of copying if it can be proved that her work resulted from independent creation³² or that the work is derived from a common source other than the allegedly infringing work.³³ Copyright infringement requires copying of a plaintiff’s protected expression. Thus, proof that the work was created absent copying of the plaintiff’s work is an affirmative defense to an action for copyright infringement.

If the plaintiff can show striking similarity between the two works, and the defendant cannot prove that her work is the result of independent creation or is derived from the same source as the plaintiff’s, the question then is whether that similarity extends to such a qualitatively significant portion of plaintiff’s protected expression that it amounts to improper appropriation and thus warrants a finding of copyright infringement.³⁴ If, however, plaintiff does not show striking similarity, but does establish access, she must first show that the defendant’s work contains similarities that support an inference of copying before proceeding to the question of improper appropriation.

2. Copying

This part of the copyright infringement test is commonly referred to as inquiring whether the two works are substantially similar, thus supporting an inference that the defendant copied from plaintiff’s work. However, this formulation is not entirely accurate and results in large part from the improper use of the “substantial similarity” terminology by the courts. The use of this terminology has led to considerable confusion as to what elements of the works need to be substantially similar and under what part of the inquiry. The following is an attempt to clarify these issues and to properly formulate the inquiry as to copying

increases or decreases. The same is true for similarities under the improper appropriation step. The similarities must be sufficient to justify a finding of improper appropriation. The necessary quantum of similarities does not decrease due to a stronger showing of access.

32. Unlike patent law, the copyright statute does not grant the copyright holder an exclusive monopoly on the protected work. The copyright statute protects against unauthorized copying of protected expression. As proof of independent creation precludes the possibility of copying, independent creation is an affirmative defense in a copyright infringement action. See NIMMER ON COPYRIGHT, § 13.01[B] (“despite proof of access and probative similarity, the trier of fact may be upheld in finding no copying if such trier believes the defendant’s evidence of independent creation . . .”). In contrast, patent law would allow a finding of infringement even in a case where the defendant could prove independent creation. See 35 U.S.C. § 271(a) (1989) (“whoever without authority makes, uses or sells any patented invention, within the United States during the term of the patent . . . infringes the patent”).

33. See NIMMER ON COPYRIGHT, § 13.01[B] [“(If defendant in fact copied from a work other than plaintiff’s (and such work is not itself copied from the plaintiff’s) it is irrelevant in plaintiff’s infringement claim that the defendant may have infringed the copyright in such other work”)].

34. The issue of improper appropriation is considered *infra* section II(B)(3).

under *Arnstein's* first prong.

a. Confusion Arises From The Use Of The Term "Substantial Similarity."

In considering the current formulations of the copyright infringement test, it should be noted that Judge Frank, who wrote the *Arnstein*³⁵ opinion, did not use the term "substantial similarity."³⁶ Judge Frank's opinion in *Arnstein* stated the test for copyright infringement as follows: "If there is evidence of access and SIMILARITIES exist, then the trier of the facts must determine whether the similarities are SUFFICIENT TO PROVE COPYING. . . . If copying is established, . . . then . . . there arise[s] the second issue, that of illicit copying (improper appropriation)."³⁷ Thus, after considering the issue of access, the *Arnstein* test calls for a two part inquiry in determining whether the defendant infringed the plaintiff's copyright. The first question is whether the defendant copied from plaintiff's work, and the second, whether such copying constitutes improper appropriation of the plaintiff's protected expression.³⁸ It is significant that on the question of copying as an initial matter, the *Arnstein* court did not suggest that the similarities need be substantial, but sufficient.

In terms of copyright infringement, similarities between the plaintiff's and defendant's works may establish one or more of the following facts: first, as discussed in the preceding section on access, striking similarities may substitute for direct proof of access;³⁹ second, similarities between the two works, when combined with proof of access, may support an inference of copying by the defendant (as in the first prong of the *Arnstein* test); and finally, similarities may support a finding of unlawful appropriation (as in the second prong of the *Arnstein* test).⁴⁰ The confusion arises in the post-*Arnstein* courts' use of the term substantial similarity in their opinions without distinguishing which part of the copyright infringement test is being addressed. In many cases a court will use the term "substantial similarity" without stating whether it is discussing the similarities with respect to the question of copying or whether it is addressing the question of improper appropriation.

Adding to this confusion is the fact that many courts do not treat the question of improper appropriation as a second, separate, inquiry.⁴¹ In *Sid & Marty Krofft Television Productions, Inc. v. McDonald's Corp.*,⁴² the Ninth Circuit

35. *Arnstein v. Porter*, 154 F.2d 464 (2d Cir. 1946).

36. See Alan Latman, "Probative Similarity" As Proof of Copying: Toward Dispelling Some Myths in Copyright Infringement, 90 COLUM. L. REV. 1187, 1193 (1990) ("in describing the [copying] element, Judge Frank does not use the phrase 'substantial similarity' even though later cases citing *Arnstein* generally suggest that he did").

37. *Arnstein*, 154 F.2d at 468 (emphasis added).

38. *Id.*

39. See *supra* section II(B)(1).

40. See PAUL GOLDSTEIN, COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES, 715 (3d ed., Foundation Press 1990).

41. See *supra* note 18, discussing the different approaches to copyright infringement analysis.

42. 562 F.2d 1157 (9th Cir. 1977).

"applied a somewhat cloudy gloss"⁴³ to the *Arnstein* test.⁴⁴ In setting out its interpretation of the copyright infringement test in *Krofft*, the Ninth Circuit referred to the first prong of the *Arnstein* test as an "extrinsic" test, the purpose of which is "[t]he determination of whether there is SUBSTANTIAL SIMILARITY in [the] ideas" upon which the works are based.⁴⁵ *Krofft* then referred to the second prong of the *Arnstein* test as an "intrinsic" test which required that the trier of fact "decide whether there is SUBSTANTIAL SIMILARITY in the expression of the ideas so as to constitute infringement."⁴⁶ The soundness of *Krofft's* formulation of the copyright infringement test is questionable for a number of reasons.⁴⁷ The concern here, however, is the confusion caused by the use of the term "substantial similarity" in the context of the copyright infringement analysis.

In an enlightening article discussing this issue in depth,⁴⁸ Professor Alan Latman states correctly that the use of "substantial similarity" in referring to the first prong of the *Arnstein* test is improper and misleading.⁴⁹ Recognizing that the only issue to be determined under *Arnstein's* first prong is whether the works' similarities are sufficient to show copying of the plaintiff's work, Professor Latman has proposed that the term "probative similarity" be used as an alternative to "substantial similarity" under this part of the *Arnstein* test. If such probative similarities are found, the question of whether the similarities are substantial, thus warranting a finding of infringement, will then be considered under the test's second, improper appropriation, prong.

Incorporating Professor Latman's terminology, the *Arnstein* test for substantial similarity has recently been stated by the Second Circuit as requiring that

A plaintiff must first show that his or her work was actually copied. Copying may be established . . . by . . . evidence [of] . . . similarities that are PROBATIVE of copying between the works. . . . If . . . copying is established, a plaintiff must then show that the copying amounts to an improper appropriation by demonstrating that SUBSTANTIAL SIMILARITY to protected material exists

43. See GOLDSTEIN, *supra* note 40, at 714.

44. *Krofft* formulated the *Arnstein* test in terms of the idea/expression dichotomy, which holds that an author's expression, not her idea is copyrightable. The idea/expression dichotomy is an accepted underpinning of modern copyright law and is codified in § 102(b) of the 1976 Copyright Act, 17 U.S.C. §§ 101-801 (1989). The idea/expression dichotomy is discussed in greater detail *infra* section II(B)(3)(a).

45. *Sid & Marty Krofft Television Productions, Inc.*, 562 F.2d at 1164 (emphasis added).

46. *Id.* (emphasis added).

47. As a practical matter, *Krofft's* extrinsic test virtually precluded the possibility of an infringement case being decided for the defendant on summary judgment grounds. See *infra* note 57 and accompanying text. More importantly, however, the extrinsic test's evaluation of only similarities of unprotected ideas makes little sense considering that the question facing the court is whether the similarities suggest that the defendant copied from the plaintiff's work, not whether such copying is sufficient to warrant a finding of improper appropriation. Similarities evidencing copying as an initial matter may arise in either the protected or the unprotected elements of the works. Recognizing the shortcomings of *Krofft's* infringement analysis, later decisions by the Ninth Circuit have modified *Krofft* to avoid these problems. See *infra* notes 59-68 and accompanying text.

48. See Latman, *supra* note 36.

49. *Krofft's* extrinsic test which requires a showing of "substantial similarity in ideas," is a good example.

between the two works.⁵⁰

In addition to the recent opinions from the Second Circuit which have adopted this terminology, the use of “probative similarity” in place of “substantial similarity” under the first part of the *Arnstein* test has been recognized and endorsed by the leading commentators.⁵¹ Thus, after ownership and access, the next issue that must be addressed under the *Arnstein* test is whether it can be shown that the defendant copied from plaintiff’s work, as evidenced by similarities that are probative of copying. We will consider this issue first, and then we will turn to the question of improper appropriation.

b. Determining Whether There Are Similarities Probative Of Copying.

On the question of probative similarity, most courts follow *Arnstein* in holding that the two works in question are to be compared in their entirety.⁵² Thus the comparison extends to both the protected and unprotected elements of the works. In making this comparison, analysis and dissection of the works is permissible, as is the use of expert testimony.⁵³ If this comparison reveals similarities that are probative of copying, only then will the trier of fact consider the question of improper appropriation.⁵⁴

According to the Ninth Circuit’s opinion in *Krofft*, however, the first prong of its analysis, the “extrinsic” test, allows for a comparison of the works’ ideas only. Under *Krofft*, a comparison of the protected expression is deferred until the second part of its analysis, which the court termed as an “intrinsic” test.⁵⁵

The soundness of *Krofft*’s reasoning on this matter is questionable.⁵⁶ If the issue being considered at this stage of the infringement analysis is whether the defendant copied from the plaintiff’s work, surely such copying can be demonstrated by similarities in protected expression as much as by similarities to the unprotected elements of the plaintiff’s work. Additionally, the *Krofft* formulation of the extrinsic test created an even more fundamental problem; because similar-

50. *Laureyssens v. Idea Group, Inc.*, 964 F.2d 131, 140 (2d Cir. 1992) (emphasis added).

51. See NIMMER ON COPYRIGHT, § 13.03[A]; 2 PAUL GOLDSTEIN, COPYRIGHT - PRINCIPLES, LAW AND PRACTICE, § 7.2.1.2 (1989 & Supp. 1992).

52. See, e.g., NIMMER ON COPYRIGHT, § 13.03[E] (citing *Morse v. Fields*, 127 F. Supp. 63 (S.D.N.Y. 1946)).

53. See *Brown Bag Software v. Symantec Corp.*, 960 F.2d 1465, 1474 (9th Cir. 1992), cert. denied, 113 S. Ct. 198 (1992); *Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222, 1232 (3d Cir. 1986); *Stillman v. Leo Burnett Co., Inc.*, 720 F. Supp. 1353, 1359 (N.D. Ill. 1989).

54. If such similarities are not found, summary judgment for the defendant is appropriate. This flows logically from the fact that there can be no finding of infringement without a showing that the defendant copied from plaintiff’s work.

55. *Sid & Marty Krofft Television Productions, Inc. v. McDonald’s Corp.*, 562 F.2d 1157, 1164 (9th Cir. 1977).

56. See NIMMER ON COPYRIGHT, § 13.03[E] (suggesting that *Krofft* “unnecessarily limits the scope of the court’s determination under the preliminary, extrinsic test” and urging that “future decisions will view the scope of the extrinsic test as that suggested by *Arnstein* rather than that adopted in *Krofft*”).

ities in the works' underlying ideas would almost always be found, *Krofft* virtually eliminated the possibility of a case being decided for the defendant on summary judgment grounds.⁵⁷

Recognizing the problems created by the *Krofft* formulation of its extrinsic test, and realizing that the separation of ideas and expression is more appropriately deferred until the unlawful appropriation portion of the infringement test,⁵⁸ recent cases in the Ninth Circuit have whittled away at *Krofft's* limitation as to the consideration of only unprotectible ideas under the extrinsic test.⁵⁹

In *Shaw v. Lindheim*,⁶⁰ the Ninth Circuit reversed the lower court's summary judgment for the defendant in a copyright infringement case involving a television series entitled "The Equalizer."⁶¹ In its decision, the court broke with

57. See *id.* Nimmer states that:

The effect of the *Krofft* bifurcated test is to expand the domain of the trier of fact, and greatly to contract the role of the court, at least in its power to rule for the defendant as a matter of law. It is true that *Krofft* concludes that the extrinsic test "may often be decided as a matter of law;" however, because the only issue under this test is that of idea similarity, and because in almost all copyright litigation the plaintiff will not file an action unless there is at a minimum some similarity of ideas, under *Krofft* a court will rarely have the power to rule for the defendant in advance of trial

58. Under *Krofft's* articulation of the extrinsic test, the difficult task of separating ideas from expression is undertaken in each case as a preliminary step to the extrinsic test. Because *Krofft's* extrinsic test virtually precludes the possibility of summary judgment for the defendant (a finding of similarities between the works' ideas is almost always found, thus requiring that the matter proceed to the finder of fact), the idea/expression analysis is rarely avoided. Under *Arnstein's* articulation, if similarities probative of copying are not found, summary judgment is properly granted and the difficult task of separating ideas from expression is avoided.

59. See Ellen M. Bierman, *It Walks Like a Duck, Talks Like a Duck, . . . But Is It a Duck? Making Sense of Substantial Similarity Law as it Applies to User Interfaces*, 16 U. PUGET SOUND L. REV. 319 (1992). Bierman notes that recent cases have modified *Krofft's* extrinsic test to the point where it now allows for analysis of both ideas and expression. Among the cases cited by Bierman are: *Jason v. Fonda*, 526 F. Supp. 774 (C.D. Cal. 1981), *aff'd*, 698 F.2d 966 (9th Cir. 1982) (allowing analysis of a literary work's plot, themes, dialogue, mood, setting, pace and sequence under the extrinsic test); *Litchfield v. Spielberg*, 736 F.2d 1352 (9th Cir. 1984), *cert. denied*, 470 U.S. 1052 (1985) (allowing consideration of the same elements in a case involving the movie, *E.T.*); *Berkic v. Crichton*, 761 F.2d 1289 (9th Cir. 1985) (allowing consideration of plot, themes, dialogue, mood, setting, pace and sequence under the extrinsic test in a case involving movie and screen treatments); *McCulloch v. Price*, 823 F.2d 316 (9th Cir. 1987) (allowing comparison, under the extrinsic test, of the similarities in the "objective details" of artistic works); *Narrell v. Freeman*, 872 F.2d 907 (9th Cir. 1989) (allowing analysis of literary characters under the extrinsic test); and *Shaw v. Lindheim*, 908 F.2d 531 (9th Cir. 1990) (reformulating *Krofft's* extrinsic test into an "objective" test for similarity of expression in cases involving literary works).

The application of an "objective" test as set forth in *Shaw* was expanded beyond the context of literary works in *Brown Bag Software v. Symantec Corp.*, 960 F.2d 1465 (9th Cir. 1992), *cert. denied*, 113 S. Ct. 198 (1992). See *infra* p. 16.

60. 908 F.2d 531 (9th Cir. 1990).

61. Shaw had entered into a contract with NBC Television which gave NBC the option to develop a television series based on a pilot script developed by Shaw entitled "The Equalizer." This script was delivered to Lindheim who worked for NBC. Lindheim acknowledged having read Shaw's script but NBC declined to produce the show. Under the terms of the option contract, the rights to "The Equalizer" reverted back to Shaw.

Lindheim left NBC approximately one year later to work for Universal Television. While at
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Krofft and held that “the extrinsic test . . . can no longer be seen as a test for mere similarity of ideas.”⁶² The court then stated that the extrinsic test is “more sensibly” described as an “objective” test⁶³ while the *Krofft* intrinsic test would appropriately be labeled as a “subjective” test.⁶⁴ Thus, *Shaw* retreated from *Krofft* in allowing for comparison of both ideas and expression under the first prong of the *Arnstein/Krofft* test. It should be noted, however, that *Shaw* was very explicit in limiting its expansive reading of the “extrinsic” test to infringement cases involving literary works.⁶⁵

Another Ninth Circuit case, *Brown Bag Software v. Symantec Corp.*,⁶⁶ was an appeal from summary judgment for the defendant in an infringement action involving computer outlining programs. The court’s opinion in *Brown Bag* endorsed the lower court’s objective analysis of both ideas and expression under what was formerly the *Krofft* extrinsic test. In doing so, the court followed *Shaw* in recognizing that “the extrinsic test looks at more than just similarity of ideas.”⁶⁷ Most importantly, however, the *Brown Bag* court made it very clear that its expansive reading of *Krofft*’s extrinsic test was not limited to literary works.⁶⁸

At least one other circuit is in agreement as to the evaluation of both ideas and expression when looking for similarities probative of copying. In *Stillman v. Leo Burnett Corp.*,⁶⁹ the plaintiff brought action for copyright infringement and other claims against Leo Burnett Corp. for allegedly copying his “silent” television commercial. In a thorough review of the Seventh Circuit’s previous decisions in this area, decisions which drew heavily from *Krofft* and other Ninth Circuit opinions,⁷⁰ the court was clear in stating that to establish copying, a plaintiff must show “similarity between the works ‘when compared in their entirety including both protectible [sic] and unprotectible [sic] material.’”⁷¹

In considering the approaches described above, it is obvious that, despite the variations in terminology, and the Ninth Circuit’s temporary aberration in *Krofft*,

Universal, Lindheim developed a television series treatment entitled “The Equalizer.” Lindheim’s treatment, in a revised and expanded version, ultimately served as the pilot script for a CBS television series entitled “The Equalizer.”

62. *Shaw*, 908 F.2d at 535.

63. *Id.*

64. *Id.* It should be noted, however, that the objective/subjective terms were originally included in the Ninth Circuit’s draft opinion for *Krofft*. But in its final opinion, the court used the extrinsic/intrinsic labels which it considered more consistent with its application of the idea/expression dichotomy to *Arnstein*’s infringement analysis. See also Steven Knowles & Ronald Jason Palmieri, *Dissecting Krofft: An Expression of New Ideas in Copyright?*, 8 SAN FERN. V. L. REV. 109 (1980) (discussing *Krofft* in detail and suggesting that the Ninth Circuit adopt the objective/subjective terminology in lieu of the extrinsic/intrinsic labels used in *Krofft*).

65. *Shaw*, 908 F.2d at 535.

66. 960 F.2d 1465 (9th Cir. 1992), cert. denied, 113 S.Ct 198 (1992).

67. *Id.* at 1475.

68. *Id.*

69. 720 F. Supp. 1353 (N.D. Ill. 1989).

70. *Id.* at 1357-1359.

71. *Id.* at 1358.

the courts begin with an analysis of the two works in question to determine whether there are similarities that support a finding that the defendant copied from the plaintiff's work. In performing this analysis, the courts will dissect the defendant's work and use expert testimony if necessary to determine whether such copying has taken place. This will entail an analysis of the works in their entirety, that is, the inquiry into similarities probative of copying will entail a comparison of the works' protected expression as well as their underlying ideas. If such copying is established, the court will then consider the question of improper appropriation.

3. Improper Appropriation

The fact that the defendant copied from the plaintiff's work, standing alone, is not enough to prove copyright infringement. The defendant's copying must be shown to have extended to the plaintiff's protected expression, and additionally, the copied expression must have been of such qualitative value as to warrant a finding of infringement.⁷²

a. Determining What Is Protectible - The Idea/Expression Dichotomy.

In the seminal case of *Baker v. Selden*⁷³ the Supreme Court established the proposition that copyright protection extends to the expression of an idea and not to the idea itself. Selden had written and copyrighted a book in which he explained a new accounting system he had developed. Included in the copyrighted work were copies of accounting forms necessary for Selden's new system. Baker subsequently began selling accounting forms similar to Selden's and Selden brought an action for copyright infringement. Although Selden prevailed on his claim in the lower courts, the Supreme Court reversed and found that Selden's copyright extended to his explanation of the new accounting system but not to its underlying idea. The Court felt that the accounting forms were not expressive but were a necessary incident to the use of the system. Because Baker used only Selden's idea, not the expression of that idea, he did not infringe Selden's copyright.⁷⁴

The basic holding of *Selden*, that copyright protection extends to an author's expression but not to the idea(s) underlying that expression, is now accepted as fundamental. This concept is commonly known as the idea/expression dichotomy and is expressly recognized in section 102(b) of the 1976 Copyright Act.⁷⁵ The

72. See NIMMER ON COPYRIGHT, § 13.03[A] ("The quantitative relation of the similar material to the total material contained in plaintiff's work is certainly of importance. However, even if the similar material is quantitatively small, if it is qualitatively important the trier of fact may properly find [improper appropriation].").

73. 101 U.S. 99 (1879).

74. Baker used Selden's idea to create a compatible version of the forms necessary for Selden's accounting system. Thus, Baker copied Selden's idea but not the expression of that idea.

75. "In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work." 17 U.S.C.

fact that the idea/expression dichotomy has become a basic tenet of modern copyright law does not, however, make for an easy determination of what is protectible and what is not.

To reach this end, the courts have articulated several tests for distinguishing protected expression from the unprotected elements of a particular work. The most widely cited of these is Judge Learned Hand's "abstractions" test set forth in *Nichols v. Universal Pictures Corp.*⁷⁶ In distinguishing unprotected ideas from protected expression, Judge Hand suggested the following analysis:

Upon any work, . . . a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the [work] is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected, since otherwise the [author] could prevent the use of his "ideas" to which, apart from their expression, his property is never extended.⁷⁷

While Judge Hand's abstractions test clearly states the issue correctly, and despite its helpfulness in making a theoretical determination as to the different elements, or levels of abstraction, within a given work, the test does not tell us at what point the plaintiff's work has crossed the line from the realm of unprotectible ideas into that of protected expression.⁷⁸ Thus, despite its helpfulness in breaking down a work into its constituent elements, the abstractions test does not tell us the level of abstraction at which the plaintiff will have crossed the line into the area of protected expression.⁷⁹

A second test for distinguishing ideas from protected expression, often referred to as the "pattern" test, was set out by Professor Zechariah Chaffee some fifteen years after Judge Hand's decision in *Nichols*.⁸⁰ Professor Chaffee stated the problem, and his solution, as follows: "No doubt the line [between unprotectible ideas and protected expression] does lie somewhere between the author's idea and the precise form in which he wrote it down. I like to say that the protection covers the 'pattern' of the work, . . . the sequence of events and the development of the interplay of characters."⁸¹

The problem is that the pattern test is only helpful in theory, not in practice.

§ 102(b) (1989).

76. 45 F.2d 119 (2d Cir. 1930).

77. *Id.* at 121.

78. See David Nimmer, et al., *A Structured Approach to Analyzing the Substantial Similarity of Computer Software in Copyright Infringement Cases*, 20 ARIZ. ST. L.J. 625, 636 (1988) ("This test does not answer the question of where the dividing line exists for a given work, but rather provides a method of analyzing a work to determine where the line should be drawn.").

79. See Matthew M. Fortnow, Note, *Why the "Look and Feel" of Computer Software Should Not Receive Copyright Protection*, 14 CARDOZO L. REV. 421, 439 (1992) ("One problem with this test is that the court arbitrarily determines the exact 'point in the series of abstractions' separating idea from expression.").

80. Zechariah Chaffee, *Reflections on the Law of Copyright*, 45 COLUM. L. REV. 503 (1945).

81. *Id.* at 513.

Its primary flaw is that, like the abstractions test, it does not tell us where the line between unprotectible ideas and protected expression should be drawn. Whether such a test is possible, or even desirable, is uncertain. But at least one commentator has stated that “[t]he problem is probably susceptible to no more precise a principle than that of the Chaffee ‘pattern’ test.”⁸²

While this test is more precise than the abstractions test in its rather explicit statement of what elements of a literary work should be considered protectible, a major drawback is its specific application to literary works. Clearly the test is not helpful in cases involving works not consisting of a “sequence of events” or “the development of the interplay of characters.” In these cases, the pattern test may not encompass all of the protected elements of a given work.⁸³ Thus, while helpful in separating idea and expression in literary works, the pattern test is of little usefulness in cases involving other types of works and thus leaves much to be desired.

Aside from Hand’s abstractions test and Chaffee’s pattern test, recent decisions have espoused other approaches for establishing what is protected expression as compared to unprotectible ideas. One popular approach extends protection to the “total concept and feel” of a plaintiff’s work.⁸⁴ In its opinion in *Roth Greetings Cards v. United Card Co.*,⁸⁵ the Ninth Circuit held that the defendant had infringed the plaintiff’s copyright in its greeting cards, stating that, “it appears to us that in total concept and feel the cards of [the defendant] are the same as the copyrighted cards”⁸⁶ The court based this conclusion on its finding that “the characters depicted in the art work, the mood they portrayed, the combination of art work conveying a particular mood with a particular message, and the arrangement of the words on the [defendant’s] greeting cards are substantially the same as in the [plaintiff’s].”⁸⁷

Since *Roth*, the “total concept and feel” approach has been applied by numer-

82. NIMMER ON COPYRIGHT, § 13.03[A][1][b].

83. For example, it is difficult to understand how the pattern test would be of much help in determining the protectability of source code, object code, data structure, and the like, in an infringement action involving computer programs.

84. This “concept and feel” terminology is derived from trademark law where the concern is the likelihood of confusion among consumers. Two works that are similar in “concept and feel” may indeed be likely to cause confusion among consumers. *See, e.g., American Greetings Corp. v. Dan-Dee Imports, Inc.*, 807 F.2d 1136 (3d Cir. 1986) (in an action under section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a), the court was clear in recognizing the plaintiff’s protectible interest in the overall appearance of its “Care-Bear” stuffed animals). Copyright, however, does not protect against such confusion, it protects against copying of protected expression. Even if the works at issue are similar in “concept and feel,” a finding of copyright infringement may be unwarranted. The similarities in “concept and feel” may derive from unprotected elements, licensed expression or material that is in the public domain. Thus, while a “concept and feel” approach may be appropriate in cases involving trademarks (and under section 43(a) of the Lanham Act), its application to copyright law is ill founded.

85. 429 F.2d 1106 (9th Cir. 1970).

86. *Id.* at 1110.

87. *Id.*

ous courts, including several outside the Ninth Circuit.⁸⁸ However, the most widely cited decision invoking the “concept and feel” analysis is probably the Ninth Circuit’s decision in *Krofft*⁸⁹ where the court found that the defendant’s “McDonaldland” television commercials appropriated the “total concept and feel” of the plaintiff’s H.R. Pufnstuf children’s show.

Despite the acceptance of the “concept and feel” approach within the Ninth Circuit and other circuits, the approach has been criticized by courts and commentators alike.⁹⁰ Extending copyright protection to the “concept and feel,” or “look and feel,” as it is sometimes referred to, is a troubling proposition.⁹¹ “One problem with protecting the [concept] and feel of a [work] is that no one knows what [concept] and feel means.”⁹² Also, there is no single common definition of “concept and feel” as used by the various circuits.⁹³ None of the courts that apply this test have attempted to define these terms.

Perhaps even more significant than the lack of a clear definition of “concept

88. *Gund, Inc. v. Applause, Inc.*, 809 F.2d 304 (2d Cir. 1993) (considering the “total concept and feel” of two stuffed dogs in denying plaintiff’s request for preliminary injunction); *Atari, Inc. v. North Am. Philips Consumer Elec. Corp.*, 672 F.2d 607 (7th Cir. 1982) (extending protection to the “total concept and feel” of plaintiff’s PAC MAN video game); *Reyher v. Children’s Television Workshop*, 533 F.2d 87 (2d Cir. 1976), *cert. denied*, 429 U.S. 980 (1976) (applying a “total concept and feel” analysis in an infringement action involving children’s books); *Atari, Inc. v. Amusement World, Inc.*, 547 F. Supp. 222 (D. Md. 1981) (using a “total concept and feel” analysis in denying plaintiff’s claim for infringement of its “Asteroids” video game).

89. *Sid & Marty Krofft Television Productions, Inc. v. McDonald’s Corp.*, 562 F.2d 1157 (9th Cir. 1977).

90. *See Cooling Systems and Flexibles, Inc. v. Stuart Radiator, Inc.*, 777 F.2d 485, 493 (9th Cir. 1985) (stating that “[w]hat is important is not whether there is substantial similarity in the total concept and feel of the works . . . but whether the . . . protectible [sic] expression in [plaintiff’s] catalog is substantially similar to the equivalent portions of [defendant’s] catalog); *Lotus Dev. Corp. v. Paperback Software, Int’l*, 740 F. Supp. 37, 62 (D. Mass. 1990) (“I have not found the ‘look and feel’ concept . . . to be significantly helpful in distinguishing between nonliteral elements of a computer program that are copyrightable and those that are not.”); *E.F. Johnson Co. v. Uniden Corp.*, 623 F. Supp. 1485, 1493 (D. Minn. 1985) (noting the absence of “an easily perceived general aura or feeling emanating from a silicon chip” as grounds for rejecting the “concept and feel” approach); *NIMMER ON COPYRIGHT*, § 13.03[A][1][c] (suggesting that the “concept and feel” approach be abandoned); Fortnow, *supra* note 79 (arguing that protection of the “look and feel” of computer programs “is not only at odds with copyright law, [but is also] at odds with the long-term health of the computer industry); Alfred C. Yen, *A First Amendment Perspective on the Ideal/Expression Dichotomy and Copyright in a Work’s “Total Concept and Feel”*, 38 EMORY L.J. 393, 411 (1989) (referring to the abstract nature of the “concept and feel” analysis and stating that “[i]f copyright claims can . . . be maintained at such a high level of abstraction, practically any similarity could conceivably support a finding of infringement”).

91. Although the term “concept and feel” is different from “look and feel,” the two terms are often used interchangeably. A “concept” is analogous to an idea underlying a particular work. A work’s look may arise from either protectible and/or unprotectible elements of a work. Protection of either is problematic as the result is often the protection of elements not properly within the scope of the copyright statute. Protection of a work’s “feel,” is also problematic as it results not from an analysis of the specific protectible elements of the works at issue, but rather, from a subjective analysis of an abstract, undefined concept.

92. Fortnow, *supra* note 79, at 425.

93. *Id.*

and feel," is the fact that extending protection to a work's concept is contrary to the specific language of section 102(b) of the Copyright Act⁹⁴ which clearly states that "[i]n no case does copyright protection . . . extend to any . . . concept, . . . regardless of the form in which it is . . . embodied in [a given] work."⁹⁵ As for protecting the "feel" of a particular work, it has been stated that "the reference to the 'feel' of a work is either a total vaguery [sic] or another invitation to protect the unprotectible."⁹⁶ Recognizing the inconsistencies and contradictions of the concept and feel approach, numerous courts have rejected it.⁹⁷

It should be noted that each of the previously discussed approaches originated from cases involving literary and artistic works. More recently, however, several other tests for determining what is protectible expression have been developed in cases involving the infringement of computer programs. In one such case, *Whelan Assocs. v. Jaslow Dental Lab.*,⁹⁸ the Third Circuit extended protection to the structure, sequence and organization of the plaintiff's computer program. The court in *Whelan* defined the underlying idea upon which the plaintiff's program was based as the "efficient organization of a dental laboratory."⁹⁹ The court then held that the non-literal elements, including the structure, sequence and organization of the program were protected expression.¹⁰⁰

Although most commentators agree that the court in *Whelan* reached the correct result in finding infringement of the plaintiff's work, the court's willingness to extend copyright protection to such broad and undefined elements as structure, sequence and organization has been harshly criticized.¹⁰¹ Extending protection to non-literal elements of a work is widely accepted as proper,¹⁰² but most courts and commentators feel *Whelan* simply goes too far.

In its statement that "the purpose or function of a utilitarian work would be the work's idea, and everything that is not necessary to that purpose or function would be part of the expression of the idea,"¹⁰³ the *Whelan* court extended the scope of protection well beyond the line of protectible expression and into the area of unprotectible ideas. Perhaps David Nimmer put the problem most suc-

94. 17 U.S.C. §§ 101-801 (1989).

95. 17 U.S.C. § 102(b) (1989).

96. Mitchell Zimmerman, *Substantial Similarity of Computer Programs After Brown Bag*, 9 No. 7 COMPUTER LAW. 6, 16 n.7 (July 1992).

97. See *supra* note 90.

98. 797 F.2d 1222 (3d Cir. 1986).

99. *Id.* at 1240.

100. *Id.* at 1248 ("We hold that . . . copyright protection of computer programs may extend beyond the programs' literal code to their structure, sequence, and organization.").

101. See, e.g., *Computer Assocs. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 705 (2d Cir. 1992) (setting out a lengthy list of decisions and law review articles critical of the *Whelan* decision).

102. See *Lotus Dev. Corp. v. Paperback Software Int'l*, 740 F. Supp. 37, 52 (D. Mass. 1990) ("copying of nonliteral expression, if sufficiently extensive, has never been upheld as permissible copying; rather, it has always been viewed as copying of elements of an expression of creative originality").

103. *Whelan Assocs. Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222, 1240 (3d Cir. 1986).

cinctly when he stated that “[t]he crucial flaw of this reasoning is that it assumes that only one ‘idea,’ in copyright terms underlies a computer program, and that once a separable idea can be identified, everything else must be expression.”¹⁰⁴

By failing to recognize that a computer program consists of not one, but a series of ideas, the *Whelan* court granted protection (to the plaintiffs) that extends well beyond that authorized under the copyright statute.¹⁰⁵ From a policy standpoint this decision is problematic as it deters others from building upon ideas and concepts that belong in the public domain. Additionally, overprotection discourages creativity and advancement of the useful arts¹⁰⁶ by interjecting uncertainty into this area of the law. For example, a software developer who is uncertain as to the level of protection that will be afforded to her competitor’s product will likely steer clear of any project that could possibly infringe upon her competitor’s copyrights. The result is a chilling effect on creativity and innovation.¹⁰⁷

Another method for separating ideas from expression, that originated in the area of computer programs, is to combine Judge Hand’s abstractions test with a “successive filtration approach.” This method is based on the premise that after the abstraction and “filtering” out of all unprotected elements of the plaintiff’s work, there will remain a core of protectible expression against which the defendant’s work can be compared.¹⁰⁸ The filtration approach was recently adopted by the Second Circuit in *Computer Assocs. Int’l, Inc. v. Altai, Inc.*¹⁰⁹ In *Altai*, the court, in considering the scope of protectible expression in the plaintiff’s copyrighted computer program, began by applying Hand’s abstractions test to break down the work into its constituent elements. The court then “filtered” out such unprotectible elements as those dictated by efficiency, hardware requirements and mechanical specifications.¹¹⁰ The court also filtered out those

104. David Nimmer, et al., *A Structured Approach to Analyzing the Substantial Similarity of Computer Software in Copyright Infringement Cases*, 20 ARIZ. ST. L.J. 625, 639 (1988).

105. *Id.* at 630 (“Providing protection for such amorphous concepts as the “overall structure” of a [computer] program, without considering whether such a structure is protectible under traditional copyright theories, increases the risk of granting copyright holders protection on par with that of patent holders.”).

106. The underlying purpose of copyright protection is “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors . . . the exclusive Right to their respective writings” U.S. CONST. art. 1, § 8.

107. *But cf. Lotus Dev. Corp. v. Borland Int’l, Inc.*, 788 F. Supp. 78, 98 (D. Mass. 1992) (discounting this argument against broad protection of computer programs as a deterrent to innovation and stating that “[t]he argument that a little copying . . . here and there in a very large work should be allowed to promote the development of great works is a policy argument Congress has rejected.”).

108. The “comparison” used under this approach is a modified version of the lay observer test which is discussed in detail *infra* section II(B)(3)(b).

109. 982 F.2d 693 (2d Cir. 1992).

110. Those elements dictated by efficiency concerns were “filtered” out as unprotected expression based on the idea/expression merger theory. This theory holds that “[w]hen there is essentially only one way to express an idea, the idea and expression are inseparable and copyright is no bar to copying that expression.” *Id.* at 707 (citing *Concrete Machinery Co. v. Classic Lawn Ornaments, Inc.*, 843 F.2d 600, 606 (1st Cir. 1988) (brackets in original)). *Altai* explained the application of the

elements that it found to be in the public domain.¹¹¹ After the filtration process, the court was left with a core of protectible expression which it compared to the defendant's allegedly infringing work.¹¹² The court failed to find substantial similarities between the defendant's work and the plaintiff's protectible expression, and thus ruled in favor of the defendant.¹¹³

idea/expression merger in the context of efficient computer program routines by stating that:

While, hypothetically, there might be a myriad of ways in which a computer programmer may effectuate certain functions within a program, — i.e., express the idea embodied in a given subroutine — efficiency concerns may so narrow the practical range of choice as to make only one or two forms of expression workable options It follows that in order to determine whether the merger doctrine precludes copyright protection to an aspect of a program's structure that is so oriented, a court must inquire "whether the use of a particular set of modules is necessary to implement that part of the program's process" being implemented If the answer is yes, then the expression represented by the programmer's choice of a specific module or group of modules has merged with their underlying idea and is unprotected.

Id. at 708 (citing *NIMMER ON COPYRIGHT*, § 13.03[F][2] and Steven R. Englund, Note, *Determining the Scope of Copyright Protection of the Structure of Computer Programs*, 88 MICH. L. REV. 866, 902 (1990)).

With respect to hardware requirements and mechanical specifications, these elements are properly filtered out because

in many instances it is virtually impossible to write a program to perform particular functions in a specific computing environment without standard techniques." This is a result of the fact that a programmer's freedom of design choice is often circumscribed by extrinsic considerations such as (1) the mechanical specifications of the computer on which a particular program is intended to run; (2) compatibility requirements of other programs with which a program is designed to operate in conjunction; (3) computer manufacturers' design standards; (4) demands of the industry being serviced; and (5) widely accepted programming practices within the computer industry.

Id. at 709-10 (citing *NIMMER ON COPYRIGHT*, § 13.03 [F][3]).

111. Elements that are in the public domain are available for all to use and may not be appropriated by any individual to the exclusion of others.

112. *Altai, Inc.*, 982 F.2d at 710.

113. Altai's problems began when it hired a programmer named Arney to help in the creation of a computer program that was to compete with a program offered by Computer Associates (CA). Arney had been working at CA when he was approached by an Altai employee who convinced him to leave CA and work for Altai. It was not known to Altai, however, that Arney brought with him from CA an unauthorized copy of the object code for CA's competing program. Without the knowledge of Altai, Arney proceeded to copy significant portions CA's object code as part of the Altai program. After Altai's program was introduced, CA suspected that parts of its program might have been copied by Altai. After CA confirmed its suspicions it filed suit against Altai for copyright infringement and misappropriation of trade secrets. Altai did not learn of Arney's actions until it received a summons and complaint, at which point Arney confirmed his copying of the CA object code.

After seeking advice from counsel, Altai attempted to salvage its program by deleting all portions of the CA code from its program (the copied portions of the code were identified by Arney). The program was then given to several other programmers, none of whom had worked on the original version of the Altai program. The goal was to have the group "reconstruct" the Altai program without access to the CA program or the earlier, "tainted" version of the Altai program (this method of developing computer programs is known as a "clean room" approach). After completing its new, "clean" version of the program, Altai shipped only the new version to its customers. It also offered "free upgrades" to all individuals owning copies of the earlier "tainted" version of the program.

At trial, the district court considered the two version of the Altai program separately in terms

In addition to the Second Circuit, other courts have applied a filtration type approach in cases involving computer programs,¹¹⁴ stuffed toy animals,¹¹⁵ auto parts catalogs,¹¹⁶ home video games,¹¹⁷ and promotional travel videos.¹¹⁸ It has also been suggested that a filtration approach should be used regardless of the type of work under consideration.¹¹⁹ Whether such a broad application of this approach will be adopted by the courts remains to be seen. Hopefully the preceding discussion has shown that a single filtration approach is preferable to the numerous approaches currently being used for separating the protectible from the unprotectible elements of various types of works.

*b. Determining Whether The Defendant's Copying Amounts To Improper Appropriation Of The Plaintiff's Protected Expression - The Lay Observer Test.*¹²⁰

The above discussion's focus is on the current methods for establishing whether a defendant has copied from a plaintiff's work and the methods for determining what elements of the plaintiff's work are protected from the defendant's copying. In this section, we consider the final issue of whether the defendant's copying of the plaintiff's protected expression rises to the level of improper appropriation, thus warranting a finding of copyright infringement.

The traditional test for improper appropriation is the lay observer test. This test calls for the fact finder to compare the plaintiff's work with the defendant's in considering the question of improper appropriation. As applied in *Harold Lloyd Corp. v. Witwer*,¹²¹ where the plaintiff's novel was claimed to have been infringed by defendant's motion picture, the court explained the test as follows:

The question . . . is to ascertain the effect of the allegedly infringing [work] on the public, that is, upon the average reasonable man. If an ordinary person who has recently read the story sits through the presentation of the picture, . . . he should [be able to] detect [literary piracy] without any aid or suggestion or

of copyright infringement. The court found that the earlier version of Altai's program, that containing copied portions of the CA object code, was infringing. With respect to the second, "clean," version, however, the court found for Altai. CA then appealed this decision to the Second Circuit, but that court affirmed the lower court's decision.

114. *Autoskill, Inc. v. National Educ. Support Sys., Inc.*, 793 F. Supp. 1557 (D.N.M. 1992).

115. *Aliotti v. R. Dakin & Co.*, 831 F.2d 898 (9th Cir. 1987).

116. *Cooling Sys. & Flexibles, Inc. v. Stuart Radiator, Inc.*, 777 F.2d 485 (9th Cir. 1985); *Novak v. NBC, Inc.*, 716 F. Supp. 745 (S.D.N.Y. 1989).

117. *Atari Games Corp. v. Nintendo of Am., Inc.*, 975 F.2d 832 (Fed. Cir. 1992).

118. *Feder v. Videotrip Corp.*, 697 F. Supp. 1165 (D. Colo. 1988).

119. See NIMMER ON COPYRIGHT, § 13.03[E][1][b] (arguing that "In the wake of *Feist*, [a successive filtration approach] should be considered not only for factual compilations and computer programs, but across the gamut of copyright law.").

120. This test for improper appropriation is alternatively referred to as the audience test. The audience test is traditionally stated in terms of the lay observer's reaction to the similarities in the works under consideration. Thus, these terms have come to be used interchangeably. For purposes of this discussion, the "lay observer" label more accurately depicts the analysis followed by most courts and serves to better illustrate the issues under consideration.

121. 65 F.2d 1 (9th Cir. 1933).

critical analysis by others. The reaction of the public should be spontaneous and immediate.¹²²

Under this analysis, it is the lay observer's reaction that determines whether the two works are substantially similar.

According to the approaches adopted in *Arnstein* and its progeny, the lay observer test constitutes the final step of the copyright infringement analysis.¹²³ Once ownership, access and copying¹²⁴ have been established, and it is determined what elements of the plaintiff's work are protectible, the courts then apply the traditional lay observer test to determine whether there has been improper appropriation of the plaintiff's protected expression.

In *Arnstein*,¹²⁵ the court formulated the question of improper appropriation as follows:

Assuming that adequate proof is made of copying, that is not enough; for there can be "permissible copying," copying that is not illicit The question, therefore, is whether defendant took from plaintiff's work so much of what is pleasing to the ears of the listeners, who comprised the audience for whom such popular music is composed, that the defendant wrongfully appropriated something which belongs to the plaintiff.¹²⁶

The *Arnstein* court's reference to "permissible copying" relates primarily to the copying of unprotected elements of a plaintiff's work. However, even in cases where copying extends to protected elements, the copying may be of such insignificant amount as to be considered de minimis, thus not amounting to improper appropriation.¹²⁷ The important consideration here is that the *Arnstein* court reaffirmed the use of the lay observer test on the issue of improper appropriation.

The *Arnstein* court also made it explicitly clear that analysis, dissection and expert testimony are *not* permissible on the issue of improper appropriation.¹²⁸ Although the exclusion of such useful tools under the second prong of the *Arnstein* test is consistent with the traditional lay observer test, this restriction, which is strictly adhered to, has proven problematic in some cases, especially those dealing with technical and complex works.

122. *Id.* at 18.

123. *E.g.*, *Sid & Marty Krofft Television Productions, Inc. v. McDonald's Corp.*, 562 F.2d 1157 (9th Cir. 1977).

124. In the case where access is not proven, a showing of striking similarity between the two works will allow the matter to proceed to the question of improper appropriation (on the question of improper appropriation the lay observer test is preceded by the separation of the unprotected ideas from the protected expression in plaintiff's work).

125. *Arnstein v. Porter*, 154 F.2d 464 (2d Cir. 1946).

126. *Id.* at 472.

127. *See supra* note 72. The consideration is not necessarily the quantity but the qualitative value of the appropriated expression.

128. *See also Sid & Marty Krofft Television Productions, Inc. v. McDonald's Corp.*, 562 F.2d 1157, 1164 (9th Cir. 1977) (stating that the intrinsic test "does not depend on the type of external criteria and analysis which marks the extrinsic test").

Consistent with *Arnstein*, *Krofft*'s intrinsic test calls for the lay observer to make the ultimate determination of whether there has been improper appropriation. And like the Second Circuit in *Arnstein*, the Ninth Circuit disallows analysis, dissection and expert testimony on this issue.¹²⁹ Although these decisions are in agreement on the exclusion of analysis, dissection and expert testimony under the lay observer test, other courts have rejected this limitation on the use of such evidence in assisting the fact finder in determining whether there has been improper appropriation.

Almost all of the cases rejecting the strict application of the lay observer test involve complex works like computer programs. *Whelan*¹³⁰ is one example where the court rejected the traditional lay observer test in a case involving computer programs. The *Whelan* court explained the problem as follows:

The ordinary observer test . . . is of doubtful value in cases involving computer programs on account of the programs' complexity and unfamiliarity to most members of the public Moreover, the distinction between the two parts of the *Arnstein* test may be of doubtful value when the finder of fact is the same person for each step: that person has been exposed to expert evidence in the first step, yet she or he is supposed to ignore or "forget" that evidence in analyzing the problem under the second step. Especially in complex cases, we doubt that the "forgetting" can be effective when the expert testimony is essential to even the most fundamental understanding of the objects in question.¹³¹

Despite the concerns noted in *Whelan* and other decisions, most courts have declined to deviate from the traditional lay observer test. Some courts, even though recognizing the problems inherent in applying the lay observer test in cases involving complex works, have felt constrained from deviating from the traditional *Arnstein/Krofft* approach excluding analysis, dissection, and expert testimony.¹³²

Other courts, recognizing the limitations of a strict audience test, have advocated the use of an "intended audience" test. The Fourth Circuit's opinion in *Dawson v. Hinshaw*, a musical copyright infringement case, is typical.¹³³ In

129. As for the Ninth Circuit's decision in *Shaw*, the court's modifications to the *Krofft* substantial similarity test were largely limited to the first prong of the test. The court in *Shaw* did, however, relabel the *Krofft* intrinsic test as the "subjective" test as it felt that that label stated more accurately the test's "mere subjective judgment as to whether the two works are or are not similar." *Shaw v. Lindheim*, 908 F.2d 535, 535 (9th Cir. 1990). But aside from the change in terminology, the *Shaw* decision left unchanged the lay observer test as formulated by the court in *Krofft*.

130. 797 F.2d 1222 (3d Cir. 1986).

131. *Id.* at 1232.

132. See, e.g., *Broderbund Software, Inc. v. Unison World, Inc.*, 648 F. Supp. 1127 (N.D. Cal. 1986) (citing *Whelan*'s decision to allow the admission of expert testimony on the question of improper appropriation but stating that "while this may be the wave of the future in this area, the Ninth Circuit's position is clearly marked out by *Krofft*, [which] controls the analysis herein.").

133. In *Dawson*, the defendant was alleged to have copied plaintiff's copyrighted song. The copied work was not, however, a recording of the song, but rather, was in the form of sheet music. Given the nature of the works under consideration, the court felt that "an ordinary lay observer, with nothing before him other than sheet music, [would be unable] to determine [whether] the two works were substantially similar." *Dawson v. Hinshaw*, 905 F.2d 731, 733 (4th Cir. 1990).

criticizing the traditional lay observer test, the *Dawson* court recognized the inadequacies of the audience test and stated that:

obedience to the undisputed principles of copyright law and the policy underlying the ordinary observer test requires a recognition of the limits of the ordinary *lay observer* characterization of the ordinary observer test. Those principles require orientation of the ordinary observer test to the works' intended audience, permitting an ordinary *lay observer* characterization of the test only where the lay public fairly represents the works' intended audience.¹³⁴

From the reasoning in *Dawson*, it should be clear that the ordinary observer test is problematic not only in cases involving complex works like musical compositions and computer programs, but in any case involving a work whose understanding requires specialized skill or knowledge beyond that possessed by the ordinary lay observer.

Part of the problem here is that the lay observer test for infringement analysis was meant to apply to copyright law a "reasonable person" standard similar to that used in other areas of the law.¹³⁵ But in other situations where the "reasonable person" standard is applied, the fact finder is asked whether the defendant's actions constitute acceptable conduct for an ordinary reasonable person placed in the defendant's shoes. Just how this standard relates to the problem of improper appropriation is unclear. Should the fact finder be asking whether a reasonable person in the defendant's position would have known that the copying at issue would amount to improper appropriation? If this is the proper question for the fact finder to ask, by what standard does she determine what is acceptable as compared to unacceptable copying? Surely this decision must be made by one who is apprised of the applicable law and one who is familiar with the type of work at issue. Unless these parameters are defined and adhered to, the risk of an erroneous decision on the issue of improper appropriation may lead to a finding of infringement, or lack thereof, when a contrary finding is warranted.¹³⁶

134. *Id.* at 737 (emphasis added).

135. *See* Computer Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 713 (2d Cir. 1992) (citing NIMMER ON COPYRIGHT, § 13.03[E](2)).

136. *See* Paul M. Grinvalsky, Comment, *Idea-Expression in Musical Analysis and the Role of the Intended Audience in Music Copyright Infringement*, 28 CAL. W. RES. L. REV. 395, 423 (1992) ("having an unaided, uninformed, disinterested or distanced finder of fact creates a potential risk of error that should not be there"); David B. Lingenfelter, Notes and Comments, *Differentiating Idea And Expression In Copyrighted Computer Software: The Test For Infringement*, 6 J.L. & COM. 419, 432 (1986)

The fact finder cannot validly identify the presence or absence of copying in a factual situation by using only the ordinary observer test. The ordinary observer test may not only mislead the finder of fact, it may also ignore the creative expression of the programmer and further erode the idea/expression dichotomy of the copyright system. The ordinary observer test may appropriately be excluded from the analysis of computer copyright disputes because its imprecision introduces a significant probability of error to the finding of fact.

See also, id. at 433 ("The fundamental threat to the copyright system in applying the ordinary observer test to computer programs is the likelihood that the idea of the program will be protected by

In recognizing these problems and the possibility that the lay observer test may result in erroneous conclusions on the issue of improper appropriation, numerous commentators have suggested, and several courts have adopted, exceptions and modifications to the traditional lay observer test. The intended audience test is one example.¹³⁷ The intended audience test is applied by substituting for the ordinary lay observer, a fact finder possessing the requisite skill or knowledge necessary to fully comprehend and understand the works under consideration. It is argued that this modification to the lay observer test is particularly necessary in cases dealing with complex works like computer programs.¹³⁸ It has also been argued that the intended audience test should be used in cases dealing with musical works,¹³⁹ advanced literary works,¹⁴⁰ and other works that are complex in nature.¹⁴¹

Arguably, the foundational decisions of *Arnstein* and *Krofft* support the use of an intended audience test. In *Arnstein*, the court stated the question of improper appropriation as “whether the defendant took from plaintiff’s works so much of what is pleasing to the ears of lay listeners, *who comprise the audience for whom such popular music is composed*, that defendant wrongfully appropriated something which belongs to the plaintiff.”¹⁴² Similarly, in *Krofft*, the court, after formulating its intrinsic test, stated that “[t]he present case demands an even more intrinsic determination because both plaintiff’s and defendant’s works are directed at an audience of children [thus raising] the particular factual issue of the impact of the respective works upon the minds and imaginations of young people.”¹⁴³ From these statements, it seems clear that the use of an intended audi-

the copyright law.”).

137. Another alternative is the use of expert testimony to “educate” the finder of fact as to the specialized consideration of the works at issue. This method was applied in *Altai*, 982 F.2d 693 and in *Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222 (3d Cir. 1986).

138. See Pamela Hobbs, *Methods of Determining Substantial Similarity In Copyright Cases Involving Computer Programs*, 67 U. DET. L. REV. 393, 406 (1990)

The ordinary observer inquiry was designed to determine general aesthetic similarities between the copyrighted work and the alleged copy Computer programs, however, have neither ordinary observers nor an easily perceived aesthetic appeal Since there are no ordinary observers of computer programs, the application of the ordinary observer standard to judge similarities in computer programs would be an entirely fictitious process. (citing Howard Root, *Copyright Infringement of Computer Programs: A Modification of the Substantial Similarity Test*, 68 MINN. L. REV. 1264 (1984)).

139. See Grinvalsky, *supra* note 136, at 396

Although music requires no specialized knowledge to simply appreciate, the same is not true in comparing two works for infringement. Music’s natural appeal masks the complexities involved in both its creation and its analysis. The analytical problems which arise from the limited language of music require that determination of music copyright infringement be made by the intended audience.

140. NIMMER ON COPYRIGHT, § 13.03[E][2] (recognizing that there will “be numerous instances where the ‘ordinary observer’ is simply not capable of detecting very real appropriation”).

141. *Id.*

142. *Arnstein v. Porter*, 154 F.2d 464, 473 (2d Cir. 1946) (emphasis added).

143. *Sid & Marty Krofft Television Productions, Inc. v. McDonald’s Corp.*, 562 F.2d 1157, 1166 (9th Cir. 1977).

ence test in situations where the works at issue are intended for a particular segment of the population or a discreet group of individuals would be consistent with both the Second Circuit's decision in *Arnstein* and the Ninth Circuit's decision in *Krofft*. Given the possibility that the lay observer may reach an erroneous conclusion on the question of improper appropriation, an error that could be avoided by applying the test to the audience for whom the work was intended, the preference for an intended audience test should be obvious.

A second restriction on the improper appropriation test is the exclusion of expert testimony. Outside the area of computer works, the courts have consistently excluded expert testimony under this prong of the copyright infringement test. But the question that must be considered is this - if expert testimony is helpful and permissible in determining improper appropriation in complex works like computer programs,¹⁴⁴ why should it be excluded in other cases where it would assist the finder of fact? In cases involving computer programs the courts have recognized that expert testimony as well as analysis and dissection of the works in question is often a necessary step in the improper appropriation decision.¹⁴⁵ But even in cases where the works are not particularly complex in nature, a lay observer may confuse similarities in unprotectible ideas with protectible expression or may simply be misled by the similarities between the two works where in fact the similarities do not warrant a finding of improper appropriation.¹⁴⁶ A particularly good example is in the case where a plaintiff's protected expression is unlawfully appropriated but is used in a different medium than that of the original. Theoretically the lay observer should be able to spot this infringing use despite its appearance in a different medium. As Nimmer points out, however, "if because of the camouflage of a different medium, the lay audience loses sight of the [infringing] similarity, the fact remains that the plaintiff [has] suffered a substantial appropriation of [her] protected expression."¹⁴⁷ This is especially troubling when one considers that such an erroneous result might be easily avoided by the use of expert testimony on this issue.

Considering the admissibility of expert testimony and its helpfulness in reaching a proper decision in certain cases, whether complex in nature or not, it is suggested that use of expert testimony in considering improper appropriation should extend beyond the realm of computer programs. In cases where the works

144. As we have seen, the reason for admission of expert testimony in cases involving complex works like computer programs is that the issues at bar are generally beyond the general knowledge of the typical lay person. If this is true in the case of computer programs, it should apply equally well in cases involving other types of works that are sufficiently complex as to be beyond the general knowledge of the typical lay persons.

145. See *Atari Games Corp. v. Nintendo of Am., Inc.*, 975 F.2d 832 (Fed Cir. 1992); *Computer Assocs. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693 (2d Cir. 1992); *Whelan Associates, Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222 (3d Cir. 1986).

146. See Bruce Perelman, Comment, *Proving Copyright Infringement Of Computer Software: An Analytical Framework*, 18 LOY. L.A. L. REV. 919, 937 (1985) (suggesting that, even in cases involving non-complex works, analysis and dissection may help avoid erroneous conclusions on the question of improper appropriation).

147. NIMMER ON COPYRIGHT, § 13.03[E][2].

at issue involve matters beyond the scope of knowledge of the ordinary lay person, the courts should use the tools available to avoid an erroneous outcome. The admissibility of expert testimony should be considered among the options available to the courts in such cases.

III. A RESTATEMENT OF THE COPYRIGHT INFRINGEMENT TEST AND ITS APPLICATION TO VARIOUS TYPES OF WORKS

The copyright infringement issues discussed in the preceding section have led us down a long and winding road. To clarify and build upon some of the concepts encountered along the way, I have in this section, restated the copyright infringement test and have provided several examples of how the modified analysis might be applied to various types of works. This restatement of the copyright infringement test and the examples provided should help to eliminate some of the confusion that exists under the numerous formulations presently followed by the courts.

A. A RESTATEMENT OF THE TEST FOR COPYRIGHT INFRINGEMENT

As an initial matter, the plaintiff in a copyright infringement action must show ownership of a valid copyright in the allegedly infringed work. In accordance with section 410(c) of the Copyright Act of 1976, a registration certificate will provide *prima facie* evidence of ownership.¹⁴⁸ Once ownership is established, the burden shifts to the defendant to prove that the plaintiff's ownership is improper or defective.¹⁴⁹ Following ownership, the plaintiff must show that the defendant had access to the copyrighted work. While access need not be affirmatively established in every instance, as is the case where two works are found to be strikingly similar, there must be at least a bare possibility that the defendant had access to the copyrighted work.

If ownership and access are established, the two works are then compared to determine whether the defendant's work bears similarities to the plaintiff's that are probative of copying. On the question of probative similarity, analysis, dissection, and expert testimony are admissible. Moreover, this evaluation should entail consideration of the works' protected and unprotected elements. If the defendant's work does not contain probative similarities, there is no infringement. If probative similarities are found, then the question of improper appropriation must be addressed.

On the question of improper appropriation, we first need to determine what elements of the plaintiff's work are protectible. To accomplish this the court applies an abstractions test¹⁵⁰ in combination with a successive filtering approach¹⁵¹ to distill from the plaintiff's work a core of protectible expression.

148. See *supra* note 9 and accompanying text.

149. *Id.*

150. See *supra* pp. 18-19.

151. See *supra* pp. 24-27.

Once the protected expression is identified, it is compared to the defendant's work to determine whether the two works are substantially similar, thus warranting a finding of infringement.

The final analysis on the question of improper appropriation is conducted by the audience for whom the work was intended.¹⁵² In making this determination, analysis, dissection, and expert testimony are admissible at the court's discretion.

B. APPLICATION OF THE COPYRIGHT INFRINGEMENT TEST TO VARIOUS TYPES OF WORKS

To demonstrate how this methodology can be applied in copyright infringement cases involving various types of works, the remainder of this section involves our application of the author's reformulated test to the following types of works; 1) literary works, 2) pictorial, graphic, sculptural and audiovisual works, 3) factual works, including maps, directories, case reports, chronicles and texts, and 4) functional works such as plans, forms, rules and computer programs.

1. Literary Works

The Ninth Circuit's decision in *Shaw v. Lindheim*¹⁵³ provides a good foundation for our analysis of copyright infringement cases involving literary works. In *Shaw*, the writer of a pilot script entitled "The Equalizer" sued the writer of a television series treatment with the same title. The primary defendant, Richard Lindheim, had entered into an option contract with Shaw on behalf of NBC Television (NBC). The contract gave NBC the option to develop a television series based on Shaw's pilot script. NBC declined to produce the series, however, and under the terms of Shaw's contract, all rights to the script reverted back to Shaw.

Lindheim later left NBC to join Universal Television (Universal). While at Universal, Lindheim wrote his own television series treatment entitled "The Equalizer." Lindheim's treatment was later expanded into the pilot script for "The Equalizer" television series which was produced by CBS. Shaw sued Lindheim for copyright infringement but the lower court granted summary judgment for Lindheim and the other defendants.

The Ninth Circuit reversed and remanded, finding that genuine issues of material fact existed with respect to Shaw's claim that the two scripts were substantially similar. Working with the facts set out in Judge Alarcon's opinion, we can apply the restated infringement test to this case to see how the new methodology works in practice. After establishing ownership and access, we can begin by asking whether there are similarities between the two works that are probative of copying by the defendant.

From the details provided it seems easily established that such similarities exist in the two literary works at issue. A few of the similarities here are the

152. See *supra* pp. 30-34.

153. 908 F.2d 531 (9th Cir. 1990).

titles, which are identical, the fact that both stories revolve around a single main character who works to protect an innocent person from a criminal blackmail/conspiracy scheme, and that both works present the main character as well educated and wealthy. Additionally, the other characters incident to the story have similar traits and the dialogue contained in the defendant's work is described as strikingly similar to the plaintiff's. Based on these similarities we can safely say that there is evidence probative of copying by the defendant.

The next step of our inquiry, and the first step in our determination of whether the defendant's copying amounts to improper appropriation, is to identify what elements of the plaintiff's work are protectible. We can begin by defining the plaintiff's work as consisting of different levels of abstraction, working from the general to the specific.¹⁵⁴ Following the Ninth Circuit's opinion, the four levels of abstraction are; 1) the theme, 2) the plot or sequence of events, 3) the mood, setting and pace, and 4) the characters and dialogue.¹⁵⁵

The court defined the theme of both works as revolving "around the character of The Equalizer - 'a man who will equalize the odds, a lone man working against the system.'"¹⁵⁶ The theme itself, however, was correctly found to be an unprotectible idea.¹⁵⁷ But looking beyond the basic idea, the court found elements of the theme to be expressive. The court considered how the plaintiff developed the theme - The Equalizer "solicits clients requiring assistance conventional law enforcement cannot offer"¹⁵⁸ and that the lead character "describes his role as to 'shake up' or 'equalize' the odds."¹⁵⁹

Turning to the plot, the court correctly noted that elements of the plot could be sufficiently expressive to be deemed protectible.¹⁶⁰ The court also recognized that, although none of the individual events were sufficiently expressive to be protectible, the pattern or sequence of events was sufficiently expressive to be considered protectible. The protectible sequence of events that make up the plot of plaintiff's work includes: the blackmail of a candidate for public office; the

154. It should be noted that the Ninth Circuit, prior to considering the levels of abstraction in the plaintiff's work, felt it necessary to state that "the fact that the two works have identical titles also weighs in [plaintiff's] favor." *Id.* at 539. Despite its recognition of the widely accepted proposition set out by the Second Circuit in *Arnstein v. Porter*, 154 F.2d 464 (2d Cir. 1946), that "[a] title cannot be copyrighted," the Ninth Circuit proceeded to "acknowledge and consider defendant's admitted copying of [plaintiff's] title in determining whether there is substantial similarity of protected expression between the two works." *Shaw v. Lindheim*, 908 F.2d 531, 540 (9th Cir. 1990).

The Ninth Circuit's analysis on this point is simply wrong. Given the fact that a title is not protected expression (a proposition that the Ninth Circuit recognizes), consideration of such unprotected elements of a plaintiff's work should be excluded from the court's analysis on the question of improper appropriation. Accordingly, our analysis differs from the Ninth Circuit's in considering the similarity in titles only on the question of probative similarity and not on the question of improper appropriation.

155. *Shaw*, 908 F.2d at 540-41.

156. *Id.* at 540.

157. *Id.*

158. *Id.*

159. *Id.*

160. *Id.* at 541.

criminals' attempt to kill The Equalizer's client by running her down with a truck; the fact that at their initial meeting The Equalizer and his client are shot at by the criminals and The Equalizer saves his client; a scene where The Equalizer appears, uninvited, at a party wearing a tuxedo; The Equalizer's confrontation with the political candidate after a campaign speech; The Equalizer "thwarts" the criminal conspiracy and saves the female client; and finally, the political candidate is forced to withdraw from the political race.¹⁶¹

The third level of abstraction identified by the court is the mood, setting, and pace. The plaintiff's story was described by the court as "fast-paced," and as having an "ominous" and "cynical" mood. The story was set in a large city. These elements were correctly found to be common to this type of work and were therefore considered unprotectible.

The fourth and final level of abstraction considered is that of the characters and dialogue. Here, the court notes the characteristics of the main character, including the fact that he is well dressed, wealthy and has expensive tastes. Also noted are his "self-assuredness" and "unshakable faith in the satisfactory outcome of any difficult situation."¹⁶²

Having determined what elements of the plaintiff's work are protectible as an initial matter, we can proceed to the filtration step and "filter" out such unprotectible elements as stock settings, stock literary figures, plot devices, and scenes a faire.¹⁶³ We can also consider filtering out elements that the court found to be protectible, beginning with what the court considered the "expressive" elements of the theme. Such elements include the main character's solicitation of clients "requiring assistance that conventional law enforcement cannot offer" and his goal of shaking up, or equalizing the odds. While not necessarily incident to the theme of the work, these elements of an action story have become so common that they should not be considered protectible. Given the court's description, the use of such common elements in television shows and other works belies the possibility that these characteristics can be found sufficiently unique to the plaintiff's work to be considered protectible. These thematic elements of the plaintiff's work should be filtered out as unprotectible.

The personal traits of the main character that the court found to be protectible should also be filtered out. These characteristics, said to include, personal wealth, expensive tastes, "self-assuredness" and "unshakable faith in the satisfactory outcome of any difficult situation,"¹⁶⁴ are simply too common to the genre to be deemed protectible.

161. *Id.*

162. *Id.*

163. See 2 PAUL GOLDSTEIN, COPYRIGHT - PRINCIPLES, LAW AND PRACTICE, § 2.7 (1989 & Supp. 1992).

As for scenes a faire, these are often described as consisting of "incidents, characters or settings which are as a practical matter indispensable, or at least standard, in the treatment of a given topic." *Alexander v. Haley*, 460 F. Supp. 40 (S.D.N.Y. 1980). For example, the use of a beach landing scene in a movie depicting the Battle of Normandy would be practically indispensable.

164. *Shaw*, 908 F.2d at 541.

Thus, after the filtration step, we are left with the plot or sequence of events as the sole protectible elements of the plaintiff's work. The question now is whether the similarities in the defendant's work are sufficient to warrant a finding of improper appropriation. On the question of improper appropriation, we can use the traditional lay observer test as this work is intended for the general public, not a limited segment of the population with specialized knowledge or expertise. Given the fact that the sequence of events identified as protectible are identical in the two works, a finding of improper appropriation and thus infringement is possible, and the lower court's grant of summary judgment for the defendant appears to have been improper.¹⁶⁵

2. Pictorial, Graphic, Sculptural and Audiovisual Works

As an example of how the restated copyright infringement test might be applied in a case involving works of visual arts, we can look to the facts of *Steinberg v. Columbia Pictures Ind., Inc.*¹⁶⁶ In that case, artist Saul Steinberg sued Columbia Pictures for copyright infringement of an illustration Steinberg had created for the cover of "The New Yorker" magazine. Steinberg's illustration, described as "a parochial New Yorker's view of the world,"¹⁶⁷ was also being sold in poster form. Columbia had created a similar poster to use in an advertisement for its movie "Moscow on the Hudson."

As in the previous example, neither the plaintiff's ownership nor the defendant's access to the plaintiff's work was disputed in *Steinberg*. The primary focus was whether the defendant copied from plaintiff's work and whether such copying amounts to improper appropriation. On the question of copying we first look for similarities that are probative of copying by the defendant. Here, such similarities include the rapidly diminishing perspective, the layout of the streets, river, and buildings, the style used to depict buildings and other structures, the colors used for the background, and the "spiky block print" used by the art-

165. The district court's analysis in *Shaw*, however, is worth noting. After establishing ownership and finding similarities in the works' ideas under the extrinsic test, the court then undertook an idea/expression analysis equivalent to a filtration approach before asking whether a triable issue of fact remained. Having found that "plaintiffs . . . failed to establish that enough protected expression [was copied]," the court granted the defendant's motion for summary judgment. In this sense, the court's analysis is similar to the restated approach set out *supra* section III(A). Despite the fact that the court reached a decision contrary to the one reached here, its attempted adoption of a more meaningful analysis than that set out in *Krofft* is admirable. Unfortunately, the Ninth Circuit was not as appreciative of what the district court was attempting to accomplish. The Ninth Circuit's opinion reasserted the validity of *Krofft* and held that "it is improper to find, as the district court did, that there is no substantial similarity as a matter of law after a [plaintiff] has satisfied the extrinsic test." See *id.* at 537. Thus, under the Ninth Circuit's opinion, once copying has been established as an initial matter, the trier of fact then considers the works as a whole for similarities of expression. And, consistent with Ninth Circuit precedent, there is no filtration step nor is the lay observer's consideration limited to only the protected elements of the works.

166. 663 F. Supp. 706 (S.D.N.Y. 1987).

167. *Id.* at 709.

ist.¹⁶⁸ Keeping in mind that similarities probative of copying may be found in both protected and unprotected elements of the defendant's work,¹⁶⁹ it is obvious that such similarities are prevalent in this case.

Having found similarities probative of copying, we can address the question of improper appropriation beginning with an abstractions test to break the plaintiff's work into its constituent elements. From these separate elements we can then determine which parts of plaintiff's work are protectible.

The first level of abstraction, the work's underlying idea, is defined by the court as "a map of the world from an egocentrically myopic perspective."¹⁷⁰ This is properly recognized as unprotectible. Next, the court considered the plaintiff's style which it described as "sketchy" and "whimsical." The court seems to have felt this style to be unique to the plaintiff, and thus protectible. This is evidenced by the court's statement that the "[d]efendant's illustration was executed in [a] . . . style that has become one of Steinberg's hallmarks," and that "since style is one ingredient of 'expression,' this . . . is significant."¹⁷¹

The next level of abstraction considered is the artists' perspective. This is described as "a bird's eye view across the edge of Manhattan and a river bordering New York City to the world beyond."¹⁷² On this point, the court found the "vantage point [looking] directly down a wide two-way cross street that intersects two avenues before reaching a river" to be protectible expression. To bolster its view that the perspective is protectible, the court states that "this is not an inevitable way of depicting blocks in a city with a grid like street system, particularly since most New York City cross streets are one-way."¹⁷³

Protectible elements of the plaintiff's work are also found in the last level of abstraction, the details of the work. Here, the court notes similarities in such protectible elements as Steinberg's depiction of the water towers, the cars, a red sign above a parking lot, and many individual buildings. The "shapes, windows, and configurations of various edifices," as well as "the ornaments, facades, and details of Steinberg's buildings" are deemed to be protected expression.¹⁷⁴ Another element that the court found to be protectible detail is the "spiky block print" used by Steinberg.¹⁷⁵

Accepting the court's conclusions as to the protectability of these elements, we can proceed to the filtration step to eliminate any additional elements which remain but should not be protected. Beginning with the court's willingness to protect the style of the plaintiff's work, it should be questioned whether the style itself should be protected. While it may be true that this style has become Steinberg's "hallmark," this does not mean that it is protected expression.¹⁷⁶ In

168. *Id.* at 713.

169. *See supra* pp. 13-17.

170. *Steinberg v. Columbia Pictures Ind., Inc.*, 663 F. Supp. 706, 712 (S.D.N.Y. 1987).

171. *Id.*

172. *Id.*

173. *Id.*

174. *Id.* at 713.

175. *Id.*

176. *See* 2 PAUL GOLDSTEIN, COPYRIGHT - PRINCIPLES, LAW AND PRACTICE, § 2.11 (1989 &

fact, the style itself is not protectible, it is the application of that style to individual elements that creates protectible expression.¹⁷⁷ The protected expression exists in the individual elements of the work, not in the overall style, which is in the public domain.

The next area for consideration is the plaintiff's perspective. The plaintiff's work is described as depicting "approximately four city blocks in detail and becomes increasingly minimalist as the design recedes into the background."¹⁷⁸ But like Steinberg's "style," his perspective is not itself protected expression. The use of certain devices to depict the perspective may render certain elements of the work protectible. The distinctions noted by the court, however, are simply too general in nature to render them protectible expression. An aerial view down a city street can hardly be said to be unique to a given artist. Such a perspective is a common vantage point for artists, photographers and others. Surely it would be improper to allow one individual to preclude others from using this perspective in their works. If there are any protectible elements to the artist's perspective, these may be shown in the individual elements of the work, but not in such general aspects as the grid-like street pattern, the diminishing perspective or the increasingly minimalist design of the background.

The similarity in the buildings, however, is significant as none of the buildings actually exist, they are all of Steinberg's creation. Thus, the defendant could not argue that the buildings in his work are simply accurate depictions of the same buildings Steinberg included in his work as the buildings do not exist in reality. These elements should be considered protected expression and are thus not filtered out.

The last elements noted as protected expression, one that should be filtered out, is the lettering which was considered unique to Steinberg. The court is simply wrong in suggesting that the similarity of the lettering is admissible on the question of improper appropriation. Typefaces, fonts and letter styles are not protectible expression. While the court could properly consider this similarity on the question of probative similarity,¹⁷⁹ it should not be admissible on the question of improper appropriation because it is not protected expression.

Having identified the protectible elements of the plaintiff's work as consisting of individual details, such as buildings, signs, and water towers, we can apply the lay observer test to determine if the similarities constitute improper appropriation. In this case, the traditional lay observer test is appropriate as the intended audience for these works is the general public. But while the lay observer test is appropriate here, there is also a strong argument to be made for allowing analysis and dissection, or perhaps expert testimony, at this point in the inquiry. If the lay observer in this case were to consider the works side by side without the aid of such evidence, she might ignore the fact that many of the similarities between

Supp. 1992).

177. *Id.*

178. *Steinberg v. Columbia Pictures Ind., Inc.*, 663 F. Supp. 706, 712 (S.D.N.Y. 1987).

179. *See supra* pp. 13-17.

the two works derive from the unprotected elements of the works. Indeed a side by side comparison might lead to a judgment based on the overall "look and feel" of the two works. This could result in an unwarranted finding of infringement. The proper procedure here would be to instruct the lay observer as to the specific elements of the plaintiff's work that are found to be protected and instruct her to consider only those elements in her improper appropriation analysis.

The court in *Steinberg* concluded that the defendant had infringed Steinberg's copyrighted work. But given the fact that many of the elements of Steinberg's work considered to be protected expression were found to be unprotectible under the filtration step of our analysis, the court may have reached the wrong conclusion. Adding to the possibility that the result is an erroneous one is the exclusion of analysis, dissection, and expert testimony on the question of improper appropriation. While the two works appear very similar, perhaps even strikingly similar, at first glance, many of the similarities are in the unprotected elements of the works. The proportion of the defendant's work that is similar to the protected elements of the plaintiff's work is significantly less than that suggested by the court, and may or may not be sufficient to support a finding of infringement.

3. *Factual Works - Maps, Directories, Case Reports, Chronicles and Texts*

Although the Supreme Court's decision in *Feist Publications, Inc. v. Rural Tel. Serv. Co., Inc.*¹⁸⁰ did not provide an extended analysis of the test for copyright infringement, the factual setting of *Feist* provides an interesting basis for the application of the restated infringement analysis to factual works like directories. Since the Court in *Feist* settled the question of copyrightability of the white pages, an interesting proposition is whether a similar result would be reached if the defendant in *Feist* had copied Feist's yellow pages.

Assuming that ownership and access are established and that the defendant admits to copying from plaintiff's work,¹⁸¹ we can focus on the question of improper appropriation. To this end, we start by applying an abstractions test to break the work down into its constituent parts, then we can apply a filtration approach to dissect the core of protected expression, if any, before considering the question of improper appropriation.

The yellow pages might be defined most generally as a directory for consumer services.¹⁸² Certainly such a concept is not protectible. Perhaps next we can consider the directory's alphabetized listings. These too would be held

180. 499 U.S. 340 (1991).

181. In *Feist*, the defendants admitted copying, thus the only issue for the Court was the question of improper appropriation. In its effort to separate the ideas from plaintiff's protected expression, the Court determined that the plaintiff's claimed expression lacked the modicum of creativity necessary to establish copyright protection. Finding that the elements claimed to be protected were not, due to a lack of originality, the Court rendered judgment for the defendant without reaching the lay observer test.

182. Alternatively, a yellow pages directory could be intended as a directory for business related services, a directory of toll free numbers, or a myriad of other variations. In this hypothetical example, a consumer directory is used as it is probably the most common and familiar variety.

unprotectible, as in the Supreme Court's decision.¹⁸³ Next, we can consider the subject headings or listings in the directory. At this point, there may be sufficient creativity to warrant some limited protection. The plaintiff's classification of goods under certain headings might be sufficiently arbitrary to be deemed protectible expression. Headings such as "Automobile Dealers-New Cars" would not be protectible but others like "Digital Instrumentation Systems & Equipment" might be. And while individual headings may or may not be protectible, the overall organization, that is, the framework or complete listing of headings should be considered protectible as there is likely to be more than a modicum of creativity present in the overall organization of the work.¹⁸⁴ A final level of abstraction¹⁸⁵ might be the individual advertisements contained in the yellow pages. These are likely to be sufficiently creative to warrant protection. Many of the advertisements contain original artwork and are individual to the companies placing the advertisements. These expressive elements should be protected from unauthorized copying.

Proceeding on the assumption that some individual headings and advertisements are found to be protected expression, we can then filter out any additional elements that should not be protected including, for example, material in the public domain, and scenes a faire.¹⁸⁶ Examples of such unprotectible elements might include a depiction of a set of scales in an advertisement for an attorney or a picture of a man or woman with a stethoscope around his or her neck in an advertisement for a physician. These elements would be filtered out as unprotectible. Finally, after having identified plaintiff's protected expression, the issue of improper appropriation could be addressed under the audience test.

In this example, the intended audience is the general public, thus the average lay observer should be capable of determining, without the aid of analysis, dissection or expert testimony, whether the defendant's copying amounts to improper appropriation. Providing that the defendant copies a qualitatively sufficient amount of plaintiff's protected expression,¹⁸⁷ the result should be a finding of copyright infringement.

183. *Feist Publications, Inc.*, 499 U.S. at 356 ("This time honored tradition does not possess the minimal creative spark required by the Copyright Act and the Constitution.").

184. *Feist* recognizes that a compilation is protectible, although the protection is said to be "thin." *Feist*, 499 U.S. at 348. As the selection and organization of the headings contained in a yellow pages directory is likely to be more arbitrary and require a greater degree of creativity than the white pages, it should follow that there is at least a thin layer of protection for the work as a compilation. This view was espoused by the Second Circuit in *Key Publications, Inc. v. Chinatown Today Publishing Enters., Inc.*, 945 F.2d 509 (2d Cir. 1991) which found the selection, coordination and arrangement of listings in plaintiff's yellow pages directory for Chinese-American businesses to be sufficiently original to warrant copyright protection as a compilation.

185. It should be noted that the levels of abstraction used in this hypothetical are arbitrary and may vary from case to case and in application to different types of works. There are no set levels of abstraction for a particular type of work. Rather, it is up to the courts to define the levels of abstraction that will best assist in analyzing the elements of the work being considered.

186. See *supra* note 163 discussing "scenes a faire".

187. See *supra* note 72.

4. Functional Works - Plans, Forms, Rules and Computer Programs

The final type of works to be considered are functional works. This class includes computer programs which are the subject of a growing number of infringement actions. In our initial discussion of the filtration approach for separating ideas from expression, we considered the Second Circuit's opinion in *Computer Assocs. Int'l, Inc. v. Altai, Inc.*¹⁸⁸ The *Altai* court's infringement analysis parallels the approach set out in the beginning of this section. Thus to demonstrate how the restated infringement test might be applied to functional works, we can consider its application in the context of computer programs by re-evaluating the *Altai* decision. The Second Circuit's opinion in *Altai* focused on the question of improper appropriation. The plaintiff's ownership was not a contested issue,¹⁸⁹ nor was the defendant's access to plaintiff's work, which was assumed by the lower court.¹⁹⁰ The existence of probative similarities was also not discussed by the appellate court as it was accepted that such similarities were present.¹⁹¹ Thus, the focus of the appellate court's opinion centers on the question of improper appropriation.

To analyze the issue of improper appropriation, the *Altai* court first applied an abstractions test which it followed with a successive filtration approach. Then, after establishing what elements of the plaintiff's work were protected, the court compared the two works on the question of improper appropriation.¹⁹²

In defining the plaintiff's computer program by level of abstraction, the district court in *Altai* identified five levels ranging from the most specific to most general. The levels of abstraction noted by the court were; 1) object code, 2) source code, 3) parameter lists, 4) services required, and 5) general outline.¹⁹³ The appellate court accepted this abstraction analysis and proceeded to the filtration process.

At this point, the court filtered out elements dictated by efficiency concerns,¹⁹⁴ and those dictated by external factors¹⁹⁵ such as mechanical specifi-

188. 982 F.2d 693 (2d Cir. 1992).

189. *Id.* at 699.

190. *Computer Assocs. Int'l, Inc. v. Altai, Inc.* 775 F. Supp. 544, 558 (E.D.N.Y. 1991).

191. The defendant acknowledged that such similarities existed but claimed that the similarities resulted from independent creation, not illicit copying. See *supra* note 113 discussing the factual background of *Altai*.

192. This discussion focuses only on the court's decision with respect to the second, "clean," version of *Altai*'s program, which was the subject of the plaintiff's appeal to the Second Circuit. See *supra* note 113. In its decision, the Second Circuit affirmed the lower court's decision as to the non-infringing nature of *Altai*'s "clean" program. In doing so, the appellate court adopted the lower court's analysis on the question of improper appropriation, albeit with several minor modifications.

193. *Computer Assocs. Int'l, Inc. v. Altai, Inc.*, 775 F. Supp. 544, 560 (E.D.N.Y. 1991).

194. See *Computer Assocs. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 708 (2d Cir. 1992) ("While, hypothetically, there might be a myriad of ways in which a [computer] programmer may effectuate certain functions within a program, — i.e., express the idea embodied in a given routine — efficiency concerns may so narrow the practical range of choice as to make only one or two forms of expression workable options.").

195. See *id.* at 708 ("in many instances it is virtually impossible to write a program to perform

cations, compatibility requirements, design standards, industry demands, and widely accepted industry practices. The court also filtered out any elements found to be in the public domain.¹⁹⁶

Once the court had “sifted out all elements of the allegedly infringed program which [were considered] ‘ideas’ or [were] dictated by efficiency or external factors or taken from the public domain,”¹⁹⁷ the court was left with a core of protected expression. The court then proceeded to consider the question of improper appropriation. On this issue, the court rejected the lay observer test in favor of an intended audience test. The court “recognize[d] the reality that computer programs are likely to be somewhat impenetrable by lay observers — and thus, seem to fall outside the category of works contemplated by those who engineered the [lay observer] test.”¹⁹⁸

From this reasoning, the court decided that “with respect to computer programs, . . . the trier of fact need not be limited by the strictures of its own lay perspective Rather, we leave it to the discretion of the . . . court to decide to what extent, if any, expert opinion . . . is warranted in a given case.”¹⁹⁹ The court thus affirmed the district court’s use of expert testimony on the question of improper appropriation.²⁰⁰ The court then proceeded to compare the protected elements of the plaintiff’s work with the defendant’s work and affirmed the district court’s ruling that the similarities in the two works were not sufficient to warrant a finding of improper appropriation and thus there was no infringement.²⁰¹

The *Altai* decision demonstrates how the restated infringement analysis, including the successive filtration method, and a modified audience test, can be used in cases involving functional works like computer programs. This analysis should prove helpful as infringement actions involving computer programs are becoming increasingly common and represent some of the more difficult and challenging issues in the area of copyright infringement.

IV. CONCLUSION

Much of the confusion that exists in the area of copyright infringement law results from the courts’ use of inaccurate and inconsistent terminology in its opinions in copyright infringement cases. Moreover, the myriad of approaches adopted by the various circuits and the variations within those circuits has led to a great deal of confusion, inconsistency, and unpredictability in this area of the law.

To avoid these problems it has been suggested that the courts follow a restate-

particular functions in a specific computing environment without employing standard techniques”).

196. *See id.* at 710.

197. *Id.*

198. *Id.* at 713.

199. *Id.*

200. But the court specifically limited its opinion on the use of expert testimony on the question of improper appropriation to cases involving computer programs. *See id.*

ment of the traditional copyright infringement analysis which requires that the plaintiff prove copyright ownership and the defendant's access to the allegedly infringed work. Once these are shown, the court focuses on whether the defendant's work contains similarities that are probative of copying. If these probative similarities are not found, the analysis is at an end. If they are present, then the finder of fact must consider whether the defendant's copying amounts to improper appropriation. Here, the court applies an abstraction test followed by a successive filtering approach to extract the protected elements from the plaintiff's work. The matter is then left to the fact finder to determine whether the similarities amount to improper appropriation.

This restatement of the copyright infringement analysis should help eliminate the confusion which has resulted from past articulations of the copyright infringement test by the various courts. An additional benefit from this formulation of the infringement analysis is its flexibility which allows application to various types of works without the exceptions and intricacies necessary under the current approaches. What is needed in this area of the law is a clear, easily applied, method for adjudicating copyright infringement claims with consistency and predictability. Hopefully, this restatement of the infringement analysis will take us in that direction.

